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DATE: February 12, 2016

TO: Jeff Catanzarita, U.S. EPA/ERT Work Assignment Manager

THROUGH: Richard Leuser, SERAS Deputy Program Manager

FROM: Scott Grossman, SERAS Task Leader

SUBJECT: BLACK RIVER SITE, WORK ASSIGNMENT SERAS-102
CARTHAGE, NEW YORK
TRIP REPORT

PURPOSE

This Trip Report presents a summary of the field work conducted on June 4 and 5, 2014 and May 11 to 14, 2015, at the Black River Site (Site) by personnel from the Lockheed Martin Scientific, Engineering, Response and Analytical Services (SERAS) contract in consultation with the United States Environmental Protection Agency (EPA) Environmental Response Team (ERT). The purpose of this investigation was to collect soil samples near the West Carthage boat ramp (2014 only), sediment core samples (2014 and 2015), and biota (fish) samples (2015) from the Black River. Sample locations were specified by New York State Department of Environmental Conservation (NYSDEC) and ERT personnel based on results of prior sampling. All samples were submitted for polychlorinated biphenyls (PCBs) and target analyte list (TAL) metal analyses and a portion of the samples collected in 2015 were also analyzed for grain size and total organic carbon (TOC).

SITE DESCRIPTION

The Site is located in Carthage, Jefferson County, New York. During the mid-1980s, Canadian researchers monitoring Lake Ontario detected PCBs in fish collected at the mouth of the Black River. Subsequent studies were conducted by the NYSDEC and EPA Region 2 to identify possible sources and the extent of contamination. These studies identified PCB-contaminated sediments downstream of the Carthage/West Carthage sewage treatment plant (STP) and the historic and present locations of paper mills, tanneries and other industrial facilities. PCBs were not detected in sediment collected upstream of the Carthage/West Carthage STP.

In 1988, the NYSDEC collected influent wastewater samples from key points along the Carthage and West Carthage sewer systems using passive in-situ contaminant extractor samplers (PISCES). Analytical results indicated that two paper mills were the primary sources of PCBs entering the STP by contributing approximately 90 percent (%) of the PCB loading to the STP. The presence of PCBs in wastewater discharged from the paper mills has been attributed to residual contamination of the process equipment and plumbing. PCBs were formerly used in ink microcapsules in carbonless copy paper, and were historically released when converting recycled paper to pulp. In addition to the paper mills, tanneries and other industries operated on the Black River in the Villages of Carthage and West Carthage since the late 1800s. These facilities extended to the water line to exploit the power produced by the river current (U.S. EPA, 2010). In 2010 the U.S. EPA/ERT and SERAS personnel conducted a sediment sampling event in the

Black River and results showed PCB levels of up to 4,000 micrograms per kilogram ($\mu\text{g}/\text{kg}$) of Aroclor-1248 and 1,400 $\mu\text{g}/\text{kg}$ of Aroclor-1254 (Lockheed Martin SERAS, 2010).

SEDIMENT AND SOIL SAMPLING ACTIVITIES

This Trip Report documents two sampling events performed in June of 2014 and May 2015. The total number of samples from the two events includes 10 soil samples collected from the boat ramp area in June 2014 and 24 vibracore samples collected from 24 locations in the Black river in June 2014 and May 2015.

Sediment sampling was conducted during the 2014 and 2015 sampling events using vibracore sampling technology as per SERAS standard operating procedure (SOP) # 2016, *Sediment Sampling* in accordance with the UFP-QAPP (Lockheed Martin SERAS, 2014). Sediment samples were collected at locations agreed upon by EPA and NYSDEC personnel based on areas of concern and on the results of prior sampling events.

Soil and vibracore locations, sample depths and mud-line (sediment/water interface) for vibracore locations are listed in Table 1 and their locations are displayed on Figure 1. Both the June 2014 and May 2015 sampling events followed the site-specific Uniform Federal Policy - Quality Assurance Project Plan (UFP-QAPP) delivered in June 2014 (Lockheed Martin SERAS, 2014).

Vibracore samples were collected by the subcontractor, Atlantic Test Labs (ATL). Upon arriving at the location, the depth to mud-line measurement was collected using an incremented weighted measurement tape. The weighted end of the tape was dropped to the river bottom, pulled tight, and measured to the nearest 0.1 foot. Sample coordinates were obtained at each location using a Trimble survey grade differential Global Positioning System (GPS).

Sampling was performed using a vibracore head to drive a 4-inch diameter stainless steel outer core lined with a dedicated hard liner to a targeted depth of 8 feet below the mud-line. A continuous sediment sample was retained in the core by a stainless steel core cutter/catcher. After reaching the targeted depth the core was withdrawn from the sediment, sectioned, capped and transported to the staging area for processing.

Once in the processing area, the cores were cut open and examined to ensure the sediments were intact and there was adequate recovery based on:

- 1) Depth of Penetration versus Recovery Length
- 2) Height of water captured in the top of the tube
- 3) Rock or other obstructions in the core catcher that may have disturbed or obstructed sediment from entering the core
- 4) Sediment missing from the bottom section of the core
- 5) Undisturbed sediment layers in core.

If the core was found to be intact with acceptable recovery, the core was sampled by ERT and SERAS personnel. Sediment compression was determined for each sample based on the ratio of sediment recovered to actual sediment depth measured in the field. These compression ratios were used to determine how much sediment would be collected for each interval. For example if a sediment core reached a depth of 10 feet, but only 8 feet of material was recovered the compression ratio was assumed to be 80% of the total length. So for an example, a sample with 80% compression, the actual sediment sampled for the 1 to 2-foot interval would be 0.8 feet. Compression ratios were assumed to be consistent for the length of the core.

After the vibracore samples were collected they were transported to the shore and processed by SERAS/ERT personnel. All cores collected in 2015 were logged by a SERAS geologist prior to sampling (Appendix A). The first sample was collected from a depth interval of 0 to 6 inches with the following

samples collected at one-foot intervals to the core bottom. Each sediment sample was composited in a dedicated aluminum pan and homogenized. Aliquots of sediments were collected and submitted to a CLP laboratory for PCB and TAL metals analyses. In 2015 a portion of the samples were also submitted for grain size and TOC analysis. During the 2014 sampling event nine vibracore locations were sampled and during the 2015 sampling event 15 vibracore locations (24 total).

Soil samples were collected by SERAS personnel at locations specified by NYSDEC personnel in the park area near the West Carthage boat ramp utilizing decontaminated stainless steel auger, as per SERAS SOP # 2015, *Soil Sampling*, to collect soil in accordance with the UFP-QAPP. A total of 10 samples were collected at 0.5-foot intervals to a maximum depth of 1.5 feet below ground surface (bgs). Maximum depths for each sample location were determined by NYSDEC personnel. The soil samples were transferred from the auger to a dedicated aluminum pan and homogenized. Soil sample were collected and submitted to a Contract Laboratory Program (CLP) laboratory for PCB and TAL metals analyses.

During the 2015 sampling event fish samples were collected by teams consisting of personnel from ERT, EPA Region 2 Division of Environmental Science and Assessment (DESA), NYSDEC and SERAS. Fish were captured from eight locations within the area of concern and at one upstream/background location. Pumpkinseed species were submitted as whole body samples. Smallmouth bass, walleye, carp and brown bullhead species were filleted and submitted for Aroclors, TAL metals and mercury analyses. Twenty-two fish fillet samples were prepared according to UFP-QAPP (2014) with skin intact and scales removed; the right fillet was used unless both sides were required to meet sample mass requirements. An additional 21 fish were split and submitted as two separate samples – one with the rib cage attached (prepared consistent with the NYSDEC, Division of Fish, Wildlife & Marine Resources, Bureau of Habitat protocol, “Fish Preparation Procedures for Contaminant Analysis”) and one without the ribcage attached. Analytical results from the fish samples will be used in a Human Health Risk Assessment (HHRA) and Baseline Ecological Risk Assessment (BERA).

All sample information was entered into the Scribe database and sample labels and chain-of-custody forms were produced. Soil and sediment samples were then labeled, packed and shipped to their respective laboratory for analyses. All validated data were imported into the Scribe database. All sample locations were collected using a Trimble GPS and differentially corrected prior to inclusion in the Scribe database.

RESULTS

All soil and sediment sample locations are summarized on Figure 1 and Table 1. Sediment samples collected in 2014 and 2015 were used to supplement the PCB sediment data collected in 2010. Data from the 2010 sampling event was summarized in a prior trip report.

In 2014 nine locations were sampled to a targeted depth of 7.5 below the mud-line and 74 sediment samples were collected. The following year in 2015, additional sampling was performed in a downstream direction. Fifteen additional locations were sampled to a targeted depth of 6.5 below the mud-line and 90 sediment samples were collected. All samples were submitted for PCB and TAL metals (including mercury) analyses.

The 2015 and 2014 PCB results in sediments are summarized in Table 2a and 2b, respectively and in Figures 2 and 3 (all samples exceeding 500 µg/kg). Overall, PCB Aroclor 1248 was the most frequently identified and detected at the highest concentrations, followed by Aroclors 1242 and 1254. Generally the highest PCBs concentrations were found in the mid-depth range (1.5 to 3.5 below the sediment surface) of the vibracore samples. The highest concentration of PCBs in sediment samples was detected at location ERT-46 in the 2.5 to 3.5-foot depth interval (110,000 µg/kg Aroclor-1248 and 96,000 Aroclor-1254) in 2014. Fourteen of the 24 sample locations had at least one sample with at least one PCB Aroclor exceeding 500

$\mu\text{g}/\text{kg}$. The results of the metals contaminants of concern are summarized in Table 3a and 3b for 2015 and 2014 sampling events, respectively. Please see the Scribe file the results for all TAL metals. A portion of the samples were also submitted for grain size and TOC analyses and the results are summarized in Table 4.

In 2014, 10 soil samples were collected in the park area near the West Carthage boat ramp to a maximum depth of 1.5 feet bgs (Figure 4). The PCB results are summarized in Table 5 and the metals are summarized in Table 6. No PCBs above the reporting limit were detected in any of the soil samples. During the 2015 sampling event, fish samples were collected from eight locations within the area of concern and at one upstream/background location. Fish metrics, percent moisture and percent lipids data are summarized in Table 7. These data will be used in the development of a HHRA and BERA.

REFERENCES

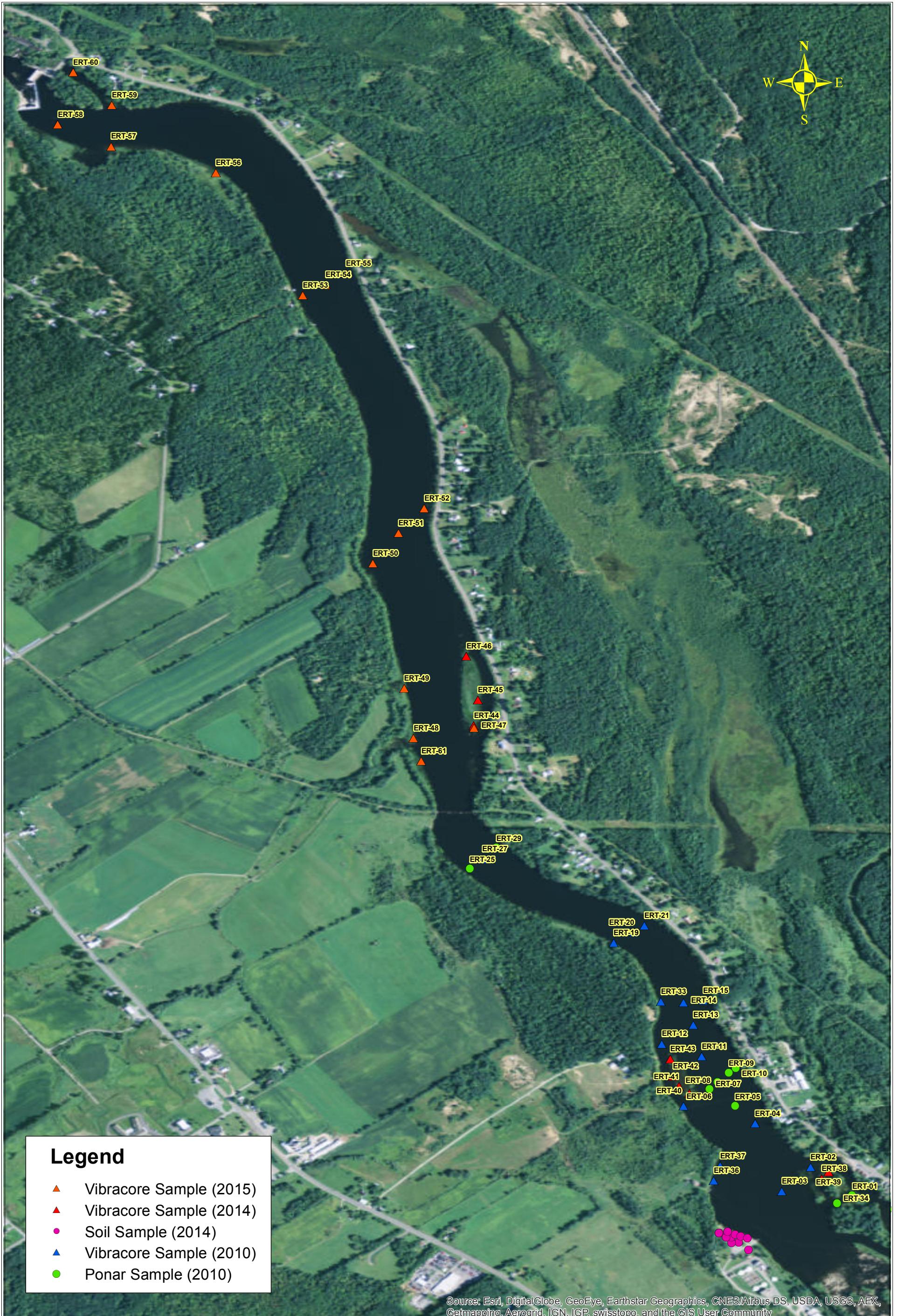
Lockheed Martin/SERAS. (2010). "Black River Site, WA 0-102, Carthage, New York, Trip Report, February 6, 2012."

Lockheed Martin/SERAS. (2014). "Quality Assurance Project Plan, Black River Site, Carthage, New York, June 2, 2014."

U.S. EPA. (2010). "HRS Documentation Record, Black River Site."

cc: Central Files, Work Assignment No. SERAS-102
 Electronic File I:\Archive\SERAS-102\D\TR\021216
 Kevin C. Taylor, SERAS Program Manager

FIGURES
Sample Locational Maps
Black River Trip Report
February 2015



Document Name: Figure_1_2015_Final_Base Map
Map Creation Date: 12/30/2015
Coordinate System: GCS WGS 1984
Datum: WGS 1984
Units: Degree

U.S. EPA Environmental Response Team
Scientific Engineering Response and Analytical Services
EP-W-09-031
W.A. # 102

Figure 1
Sample Location Map
Black River Site
Carthage/West Carthage, NY

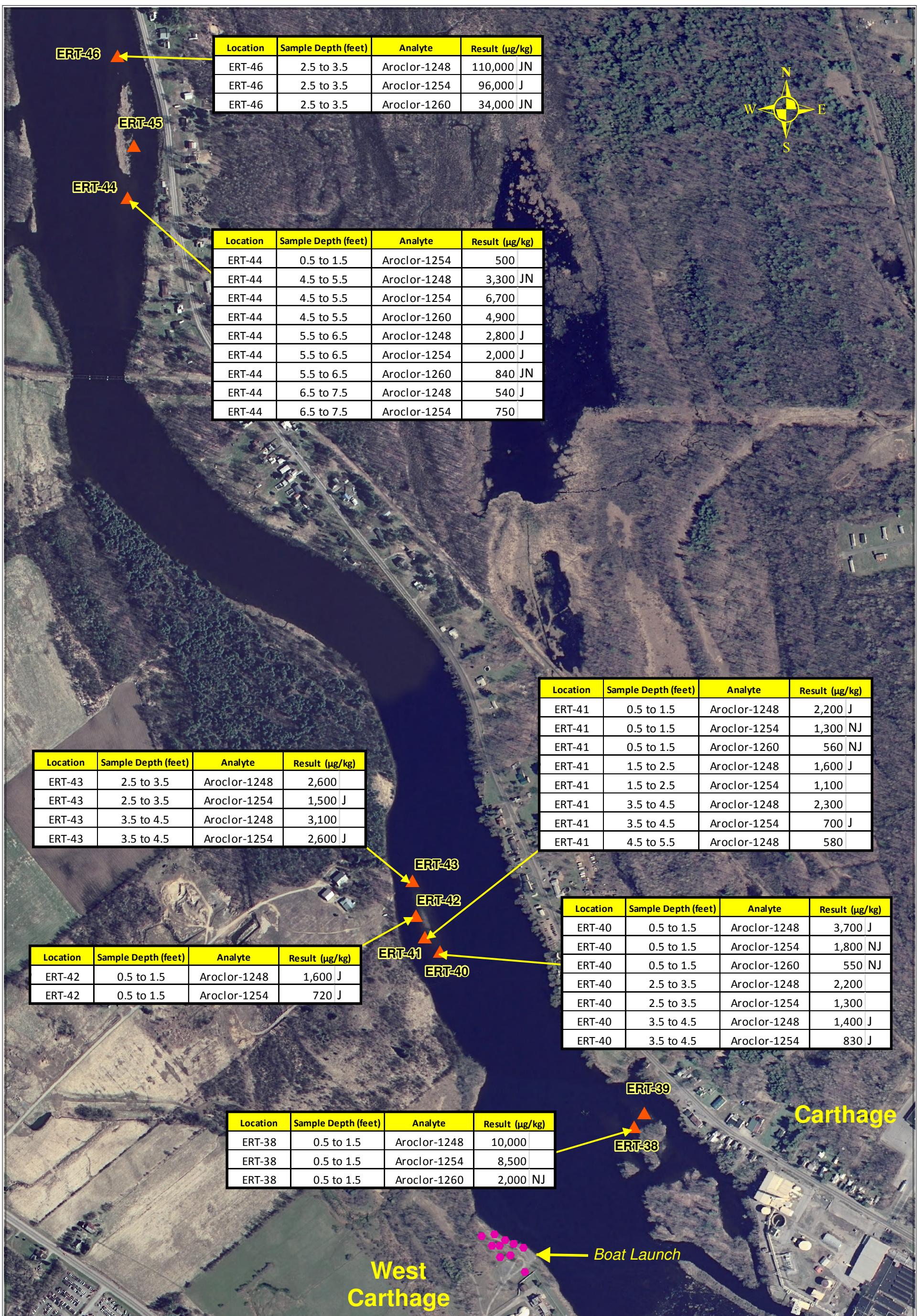


Document Name: Figure_2_2015_Final_Base Map
Map Creation Date: 1/13/2016
Coordinate System: GCS WGS 1984
Datum: WGS 1984
Units: Degree

U.S. EPA Environmental Response Team
Scientific Engineering Response and Analytical Services
EP-W-09-031
W.A. # 102

Figure 2
2015 Vibracore Sample Locations
Black River Site
Carthage/West Carthage, NY

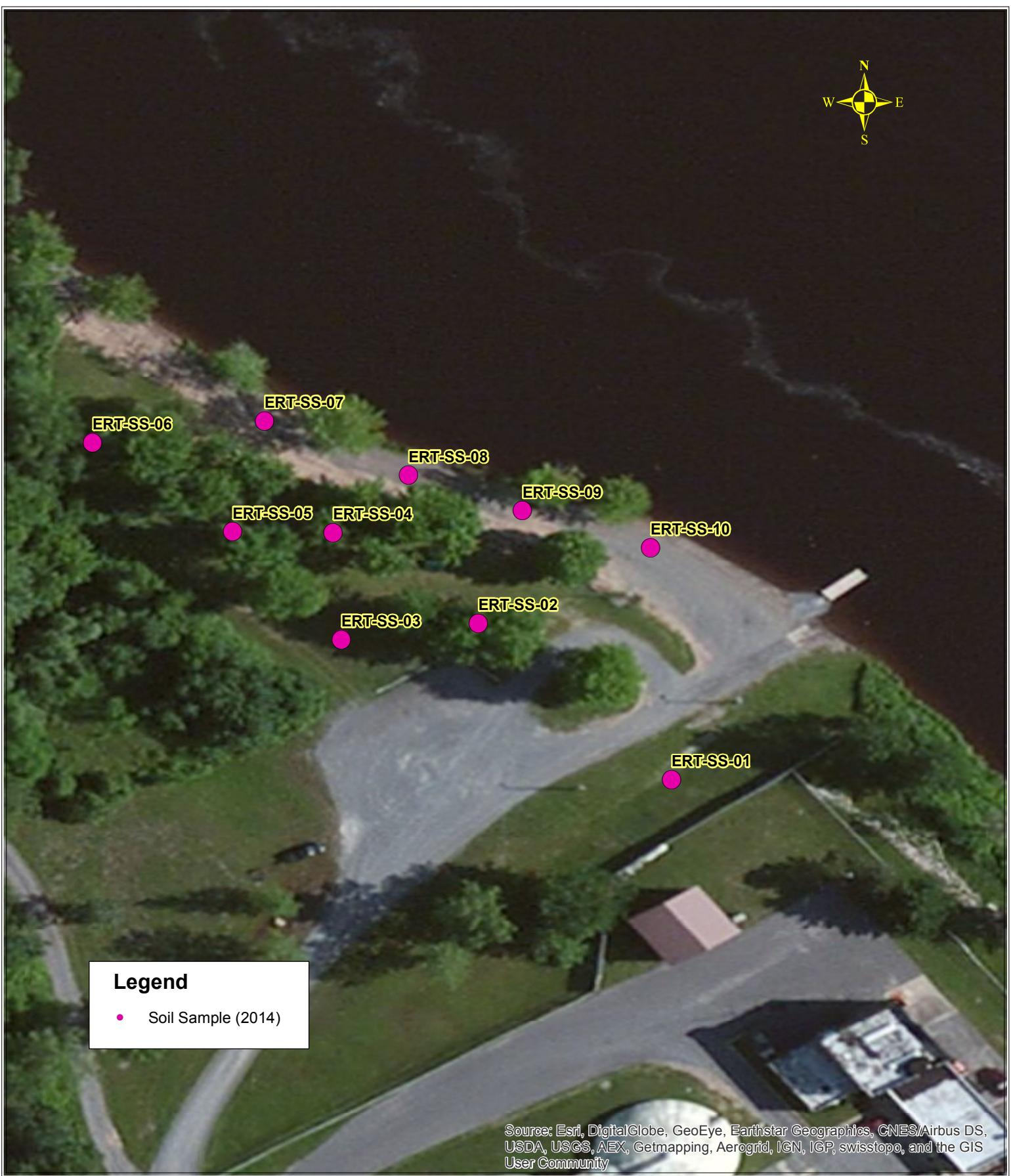
0 220 440 880 1,320 1,760
Feet



0 260 520 1,040 1,560 2,080 Feet

U.S. EPA Environmental Response Team
Scientific Engineering Response and Analytical Services
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W.A. # 102

Figure 3
Sediment PCB Concentrations
Black River Site
Carthage/West Carthage, NY



Document Name: Figure_4_2015_Final_Base Map

Map Creation Date: 1/13/2016

Coordinate System: GCS WGS 1984

Datum: WGS 1984

Units: Degree

0 12.5 25 50 75 100
Feet

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W.A. # 102

Figure 4
2014 Soil Sample Locations
Black River Site
Carthage/West Carthage, NY

TABLES
Sediment, Soil and Fish Tissue Analytical Results
Black River Trip Report
February 2015

Table 1							
Sediment and Soil Sample Locations							
Black River Site, WA 0-102							
Carthage, New York							
Sample Location	Matrix	Northing	Easting	Latitude	Longitude	Mudline Elevation (feet)	Maximum Sample Depth (feet)
ERT-38	Sediment	1,454,061.2	1,072,214.2	43.986378	-75.625826	678.8	7.5
ERT-39	Sediment	1,454,140.8	1,072,270.3	43.986595	-75.625610	679.0	6.5
ERT-40	Sediment	1,455,038.7	1,071,092.3	43.989095	-75.630046	678.4	7.5
ERT-41	Sediment	1,455,118.0	1,071,004.2	43.989315	-75.630377	679.1	7.5
ERT-42	Sediment	1,455,239.0	1,070,950.9	43.989649	-75.630574	679.0	7.5
ERT-43	Sediment	1,455,437.6	1,070,926.9	43.990194	-75.630657	678.5	7.5
ERT-44	Sediment	1,459,295.1	1,069,233.4	44.000829	-75.636922	678.5	7.5
ERT-45	Sediment	1,459,594.4	1,069,263.7	44.001649	-75.636794	678.9	7.5
ERT-46	Sediment	1,460,103.3	1,069,161.0	44.003048	-75.637162	678.5	7.5
ERT-47	Sediment	1,459,264.6	1,069,235.1	44.000745	-75.636917	680.5	6.5
ERT-48	Sediment	1,459,141.9	1,068,728.9	44.000425	-75.638846	675.7	6.5
ERT-49	Sediment	1,459,720.5	1,068,644.4	44.002014	-75.639142	676.3	6.5
ERT-50	Sediment	1,461,171.4	1,068,365.8	44.006003	-75.640138	679.8	3.5
ERT-51	Sediment	1,461,524.8	1,068,575.0	44.006966	-75.639327	679.4	2.5
ERT-52	Sediment	1,461,813.3	1,068,789.1	44.007750	-75.638501	679.4	5.5
ERT-53	Sediment	1,464,280.0	1,067,741.5	44.014549	-75.642375	679.0	6.5
ERT-54	Sediment	1,464,405.8	1,067,930.6	44.014888	-75.641651	680.5	5.5
ERT-55	Sediment	1,464,540.2	1,068,100.2	44.015252	-75.641001	679.7	0.5
ERT-56	Sediment	1,465,698.8	1,066,995.3	44.018464	-75.645150	679.1	6.5
ERT-57	Sediment	1,465,995.1	1,066,113.4	44.019304	-75.648490	679.5	6.5
ERT-58	Sediment	1,466,244.9	1,065,663.3	44.020004	-75.650190	680.1	6.5
ERT-59	Sediment	1,466,476.5	1,066,113.3	44.020625	-75.648469	680.3	6.5
ERT-60	Sediment	1,466,854.0	1,065,784.2	44.021670	-75.649704	678.7	0.5
ERT-61	Sediment	1,458,875.7	1,068,797.4	43.999692	-75.638598	681.1	6.5
NYS1	Sediment	1,453,861.6	1,072,508.1	43.985821	-75.624719	NA	NA
NYS2	Sediment	1,457,073.5	1,069,983.7	43.994711	-75.634169	NA	NA
NYS3	Sediment	1,458,780.6	1,068,795.6	43.999431	-75.638609	NA	NA
NYS4	Sediment	1,465,747.6	1,066,887.4	44.018601	-75.645559	NA	NA
ERT-SS-01	Soil	1,453,221.9	1,071,609.9	43.984095	-75.628159	682.2	1
ERT-SS-02	Soil	1,453,313.9	1,071,525.8	43.984350	-75.628475	686.8	1.5
ERT-SS-03	Soil	1,453,303.6	1,071,467.1	43.984324	-75.628698	686.5	0.5
ERT-SS-04	Soil	1,453,367.1	1,071,462.8	43.984498	-75.628711	686.0	0.5
ERT-SS-05	Soil	1,453,367.3	1,071,419.6	43.984500	-75.628876	686.5	0.5
ERT-SS-06	Soil	1,453,419.5	1,071,359.0	43.984645	-75.629104	685.0	0.5
ERT-SS-07	Soil	1,453,433.2	1,071,432.6	43.984680	-75.628823	682.0	1.5
ERT-SS-08	Soil	1,453,401.6	1,071,494.8	43.984592	-75.628588	681.8	1
ERT-SS-09	Soil	1,453,381.2	1,071,543.9	43.984534	-75.628403	682.3	0.5
ERT-SS-10	Soil	1,453,359.8	1,071,599.2	43.984474	-75.628194	681.3	0.5
Coordinates and elevations shown hereon are referenced horizontally to the North American Datum of 1983, 2011 adjustment (NAD83/2011) and projected on the New York State Plane Coordinate System (Central Zone) and vertically to the North American Vertical Datum of 1988 (NAVD88).							
The reference horizontal and vertical control station is a Continuously Operating Reference Station (CORS) designated as "WATERTOWN CORS ARP" (PID DI0628), last adjusted by the National Geodetic Survey in August 2011. Elevation 497.62 feet.							

Table 2a

2015 Sediment Sampling Results for PCBs (µg/kg)

Black River Site, WA 0-102

Carthage, New York

Location	Date Collected	Sample Number	Depth Range (feet)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268		
ERT-47	5/11/2015	102-0333	0 to 0.5	77 U	77 U									
		102-0334	0.5 to 1.5	96 U	96 U									
		102-0335	1.5 to 2.5	75 U	75 U									
		102-0336	2.5 to 3.5	71 U	71 U									
		102-0337	3.5 to 4.5	72 U	72 U									
		102-0338	4.5 to 5.5	67 U	67 U	67 U	240 NJ	180 J	72	67 U	67 U	67 U	67 U	
		102-0339	5.5 to 6.5	80 U	80 U	80 U	1,600	1,400	630	80 U	80 U	80 U	80 U	
ERT-48	5/12/2015	102-0354	0 to 0.5	64 U	64 U									
		102-0355	0.5 to 1.5	58 U	58 U	58 U	58 U	97 U	58 U					
		102-0356	1.5 to 2.5	64 U	64 U	64 U	64 U	3,800	1,800	64 U	64 U	64 U	64 U	
		102-0357	2.5 to 3.5	62 U	62 U	62 U	62 U	12,000	8,500	62 U	62 U	62 U	62 U	
		102-0358	3.5 to 4.5	69 U	69 U	69 U	69 U	1,100	470	69 U	69 U	69 U	69 U	
		102-0359	4.5 to 5.5	51 U	51 U									
		102-0360	5.5 to 6.5	66 U	66 U									
ERT-49	5/12/2015	102-0347	0 to 0.5	79 U	79 U	79 U	79 U	300	130	79 U	79 U	79 U	79 U	
		102-0348	0.5 to 1.5	67 U	67 U	67 U	67 U	80	45 J	67 U	67 U	67 U	67 U	
		102-0349	1.5 to 2.5	68 U	68 U									
		102-0350	2.5 to 3.5	70 U	70 U									
		102-0351	3.5 to 4.5	79 U	79 U									
		102-0352	4.5 to 5.5	68 U	68 U									
		102-0353	5.5 to 6.5	59 U	59 U									
<u>µg/kg = micrograms per kilogram</u>														
U = Not Detected														
J = Estimated Value														
UJ = Not Detected; Reporting Limit is Estimated														
NJ = Tentatively Identified with Approximate Concentration. Data are sufficiently definitive for Hazard Ranking System (HRS).														
Note: Red indicates PCB Aroclor result over 1,000 µg/kg .														

Table 2a

2015 Sediment Sampling Results for PCBs (µg/kg)

Black River Site, WA 0-102

Carthage, New York

Location	Date Collected	Sample Number	Depth Range (feet)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268
ERT-50	5/11/2015	102-0361	0 to 0.5	84 U								
		102-0362	0.5 to 1.5	75 U	75 U	75 U	75 U	410 J	170 J	75 U	75 U	75 U
		102-0363 (DUP)	0.5 to 1.5	74 U	74 U	74 U	74 U	640 J	310 J	74 U	74 U	74 U
		102-0364	1.5 to 2.5	89 U	89 U	89 U	89 U	2,700	860	89 U	89 U	89 U
		102-0365 (DUP)	1.5 to 2.5	91 U	91 U	91 U	91 U	530 J	200	91 U	91 U	91 U
		102-0366	2.5 to 3.5	88 U								
ERT-51	5/12/2015	102-0367	0 to 0.5	130 UJ	130 UJ	130 UJ	130 UJ	370 U	150 J	130 UJ	130 UJ	130 UJ
		102-0368	0.5 to 1.5	44 U	44 U	44 U	210 J	150 J	45	44 U	44 U	44 U
		102-0369	1.5 to 2.5	42 U	42 U	42 U	130 U	94 U	42 U	42 U	42 U	42 U
ERT-52	5/12/2015	102-0370	0 to 0.5	86 U								
		102-0371	0.5 to 1.5	78 U	78 U	78 U	78 U	110	78 U	78 U	78 U	78 U
		102-0372	1.5 to 2.5	85 U	85 U	85 U	4,700 JN	5,200	2,100 J	85 U	85 U	85 U
		102-0373	2.5 to 3.5	88 U	88 U	88 U	6,800 JN	11,000	6,600	88 U	88 U	88 U
		102-0374	3.5 to 4.5	90 U	90 U	90 U	2,800 J	2,300	910	90 U	90 U	90 U
		102-0375	4.5 to 5.5	90 U	90 U	90 U	90 U	1,400	590	90 U	90 U	90 U
ERT-53	5/12/2015	102-0384	0 to 0.5	88 U								
		102-0385	0.5 to 1.5	75 U								
		102-0386	1.5 to 2.5	70 U								
		102-0387	2.5 to 3.5	74 U	74 U	74 U	74 U	700	340	74 U	74 U	74 U
		102-0388	3.5 to 4.5	78 U	78 U	78 U	78 U	890	420	78 U	78 U	78 U
		102-0389	4.5 to 5.5	74 U	74 U	74 U	74 U	320	170	74 U	74 U	74 U
		102-0390	5.5 to 6.5	69 U								

µg/kg = micrograms per kilogram

U = Not Detected

J = Estimated Value

UJ = Not Detected; Reporting Limit is Estimated

NJ = Tentatively Identified with Approximate Concentration. Data are sufficiently definitive for Hazard Ranking System (HRS).

Note: Red indicates PCB Aroclor result over 1,000 µg/kg .

Table 2a

2015 Sediment Sampling Results for PCBs (µg/kg)

Black River Site, WA 0-102

Carthage, New York

Location	Date Collected	Sample Number	Depth Range (feet)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268		
ERT-54	5/12/2015	102-0376	0 to 0.5	44 U	44 U	44 U	44 U	870	510	44 U	44 U	44 U		
		102-0377	0.5 to 1.5	51 U	51 U	51 U	3,200	2,500	680	51 U	51 U	51 U		
		102-0378 (DUP)	0.5 to 1.5	48 U	48 U	48 U	530	390	120	48 U	48 U	48 U		
		102-0379	1.5 to 2.5	69 U	69 U	69 U	4,900 J	11,000	6,400	69 U	69 U	69 U		
		102-0380	2.5 to 3.5	57 U	57 U	57 U	57 U	8,000	5,400	57 U	57 U	57 U		
		102-0381	3.5 to 4.5	63 U	63 U	63 U	63 U	89 JN	63 U	63 U	63 U	63 U		
		102-0382	4.5 to 5.5	52 U										
ERT-55	5/12/2015	102-0383	0 to 0.5	93 U										
ERT-56	5/11/2015	102-0318	0 to 0.5	93 U	93 U	93 U	93 U	290 U	210 U	93 U	93 U	93 U		
		102-0319	0.5 to 1.5	79 U	79 U	79 U	79 U	520	250	79 U	79 U	79 U		
		102-0325	0.5 to 1.5	84 U	84 U	84 U	84 U	490	210	84 U	84 U	84 U		
		102-0320	1.5 to 2.5	76 U	76 U	76 U	76 U	320	200	76 U	76 U	76 U		
		102-0321	2.5 to 3.5	74 U										
		102-0322	3.5 to 4.5	78 U										
		102-0323	4.5 to 5.5	71 U										
		102-0324	5.5 to 6.5	71 U										
ERT-57	5/11/2015	102-0326	0 to 0.5	74 U										
		102-0327	0.5 to 1.5	87 U	87 U	87 U	87 U	680 U	460	87 U	87 U	87 U		
		102-0328	1.5 to 2.5	67 U	67 U	67 U	67 U	260	170	67 U	67 U	67 U		
		102-0329	2.5 to 3.5	83 U	83 U	83 U	83 U	130 J	72 J	83 U	83 U	83 U		
		102-0330	3.5 to 4.5	62 U	62 U	62 U	62 U	66 J	62 U	62 U	62 U	62 U		
		102-0331	4.5 to 5.5	79 U	79 U	79 U	79 U	400 J	280	79 U	79 U	79 U		
		102-0332	5.5 to 6.5	83 U	83 U	83 U	1,300 J	1,800	890 U	83 U	83 U	83 U		
µg/kg = micrograms per kilogram														
U = Not Detected														
J = Estimated Value														
UJ = Not Detected; Reporting Limit is Estimated														
NJ = Tentatively Identified with Approximate Concentration. Data are sufficiently definitive for Hazard Ranking System (HRS).														
Note: Red indicates PCB Aroclor result over 1,000 µg/kg .														

Table 2a

2015 Sediment Sampling Results for PCBs (µg/kg)

Black River Site, WA 0-102

Carthage, New York

Location	Date Collected	Sample Number	Depth Range (feet)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268		
ERT-58	5/11/2015	102-0311	0 to 0.5	91 U	91 U									
		102-0312	0.5 to 1.5	81 U	81 U									
		102-0313	1.5 to 2.5	79 U	79 U									
		102-0314	2.5 to 3.5	72 U	72 U									
		102-0315	3.5 to 4.5	68 U	68 U									
		102-0316	4.5 to 5.5	62 U	62 U	62 U	62 U	610	320	62 U	62 U	62 U	62 U	
		102-0317	5.5 to 6.5	68 U	68 U	68 U	68 U	120	49 J	68 U	68 U	68 U	68 U	
ERT-59	5/11/2015	102-0301	0 to 0.5	98 U	98 U									
		102-0302	0.5 to 1.5	90 U	90 U									
		102-0303	1.5 to 2.5	94 U	94 U									
		102-0304	2.5 to 3.5	97 U	97 U	97 U	97 U	1,400	710 J	97 U	97 U	97 U	97 U	
		102-0305	3.5 to 4.5	94 U	94 U									
		102-0306	4.5 to 5.5	87 U	87 U									
		102-0307	5.5 to 6.5	78 U	78 U									
ERT-60	5/11/2015	102-0309	0 to 0.5	110 UJ	110 UJ									
		102-0310 (DUP)	0 to 0.5	110 UJ	110 UJ									
ERT-61	5/12/2015	102-0340	0 to 0.5	72 U	72 U									
		102-0341	0.5 to 1.5	76 U	76 U	76 U	76 U	540	250	76 U	76 U	76 U	76 U	
		102-0342	1.5 to 2.5	71 U	41 J	71 U	71 U	71 U	71 U					
		102-0343	2.5 to 3.5	76 U	76 U									
		102-0344	3.5 to 4.5	66 U	66 U									
		102-0345	4.5 to 5.5	62 U	62 U									
		102-0346	5.5 to 6.5	48 U	48 U									
µg/kg = micrograms per kilogram														
U = Not Detected														
J = Estimated Value														
UJ = Not Detected; Reporting Limit is Estimated														
NJ = Tentatively Identified with Approximate Concentration. Data are sufficiently definitive for Hazard Ranking System (HRS).														
Note: Red indicates PCB Aroclor result over 1,000 µg/kg .														

Table 2b

2014 Sediment Sampling Results for PCBs ($\mu\text{g}/\text{kg}$)

Black River Site, WA 0-102

Carthage, New York

Location	Date Collected	Sample Number	Depth Range (feet)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268
ERT-38	6/4/2014	102-0236	0 to 0.5	3.9 U	3.9 U	3.9 U	3.9 U	280 J	370	3.9 U	3.9 U	3.9 U
		102-0237	0.5 to 1.5	3.8 U	3.8 U	3.8 U	3.8 U	10,000	8,500	2,000 NJ	3.8 U	3.8 U
		102-0238	1.5 to 2.5	2.6 U	2.6 U	2.6 U	2.6 U	66 J	2.6 U	2.6 U	2.6 U	2.6 U
		102-0239	2.5 to 3.5	2.2 U								
		102-0240	3.5 to 4.5	2.3 U								
		102-0241	4.5 to 5.5	2.3 U								
		102-0242	5.5 to 6.5	2.2 U								
		102-0243	6.5 to 7.5	2.2 U								
ERT-39	6/4/2014	102-0244	0 to 0.5	4.8 U	4.8 U	4.8 U	4.8 U	51 J	30	18	4.8 U	4.8 U
		102-0245	0.5 to 1.5	3.9 U	3.9 U	3.9 U	3.9 U	98	71	44	3.9 U	3.9 U
		102-0246	1.5 to 2.5	4.2 U	4.2 U	4.2 U	4.2 U	430 J	230 J	170 J	4.2 U	4.2 U
		102-0247	2.5 to 3.5	3 U	3 U	3 U	3 U	65 J	46 NJ	36	3 U	3 U
		102-0248	3.5 to 4.5	3.6 U								
		102-0249	4.5 to 5.5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
		102-0250	5.5 to 6.5	5.6 UJ								
ERT-40	6/4/2014	102-0201	0 to 0.5	2.6 U								
		102-0202	0.5 to 1.5	2.7 U	2.7 U	2.7 U	2.7 U	3,700 J	1,800 NJ	550 NJ	2.7 U	2.7 U
		102-0203	1.5 to 2.5	3 U	3 U	3 U	3 U	320 J	190 J	71 J	3 U	3 U
		102-0204	2.5 to 3.5	4.1 U	4.1 U	4.1 U	4.1 U	2,200	1,300	370 NJ	4.1 U	4.1 U
		102-0205	3.5 to 4.5	4 U	4 U	4 U	4 U	1,400 J	830 J	440 J	4 U	4 U
		102-0207	4.5 to 5.5	3.1 U								
		102-0208	5.5 to 6.5	4.2 U								
		102-0209	6.5 to 7.5	3.9 U								
ERT-40 (Dup)	6/4/2014	102-0206	3.5 to 4.5	3.8 U	3.8 U	3.8 U	3.8 U	2,600 J	2,300 J	1,400	3.8 U	3.8 U
$\mu\text{g}/\text{kg}$ = micrograms per kilogram												
U = Not Detected												
J = Estimated Value												
UJ = Not Detected; Reporting Limit is Estimated												
NJ = Tentatively Identified with Approximate Concentration. Data are sufficiently definitive for Hazard Ranking System (HRS).												
Note: Red indicates PCB Aroclor result over 1,000 $\mu\text{g}/\text{kg}$.												

Table 2b

2014 Sediment Sampling Results for PCBs ($\mu\text{g}/\text{kg}$)

Black River Site, WA 0-102

Carthage, New York

Location	Date Collected	Sample Number	Depth Range (feet)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268	
ERT-41	6/4/2014	102-0210	0 to 0.5	4.7 U	4.7 U	4.7 U	4.7 U	470	270 J	98 J	4.7 U	4.7 U	
		102-0211	0.5 to 1.5	3.8 U	3.8 U	3.8 U	3.8 U	2,200 J	1,300 NJ	560 NJ	3.8 U	3.8 U	
		102-0212	1.5 to 2.5	3.1 U	3.1 U	3.1 U	3.1 U	1,600 J	1,100	440 NJ	3.1 U	3.1 U	
		102-0213	2.5 to 3.5	3.8 U	3.8 U	3.8 U	3.8 U	84	3.8 U	3.8 U	3.8 U	3.8 U	
		102-0214	3.5 to 4.5	4 U	4 U	4 U	4 U	2,300	700 J	340 J	4 U	4 U	
		102-0215	4.5 to 5.5	4.2 U	4.2 U	4.2 U	4.2 U	580	320	180	4.2 U	4.2 U	
		102-0216	5.5 to 6.5	4 U	4 U	4 U	4 U	22	4 U	4 U	4 U	4 U	
		102-0217	6.5 to 7.5	4.3 U									
ERT-41 (Dup)	6/4/2014	102-0218	6.5 to 7.5	3.8 U									
ERT-42	6/4/2014	102-0219	0 to 0.5	3.9 U	3.9 U	3.9 U	3.9 U	450	230 J	99 J	3.9 U	3.9 U	
		102-0220	0.5 to 1.5	4 U	4 U	4 U	4 U	1,600 J	720 J	380 J	4 U	4 U	
		102-0221	1.5 to 2.5	4.3 U									
		102-0222	2.5 to 3.5	28 NJ	4.3 U								
		102-0223	3.5 to 4.5	3.9 U									
		102-0224	4.5 to 5.5	3.9 U									
		102-0225	5.5 to 6.5	3.6 U									
		102-0227	6.5 to 7.5	3.9 U	3.9 U	3.9 U	3.9 U	44	28	15	3.9 U	3.9 U	
ERT-42 (Dup)	6/4/2014	102-0226	5.5 to 6.5	3.9 U									
ERT-43	6/4/2014	102-0228	0 to 0.5	3.3 U	3.3 U	3.3 U	3.3 U	400	310	180 J	3.3 U	3.3 U	
		102-0229	0.5 to 1.5	3.6 U	3.6 U	3.6 U	3.6 U	28	3.6 U	5.9	3.6 U	3.6 U	
		102-0230	1.5 to 2.5	3.1 U	3.1 U	3.1 U	3.1 U	60	21	12 J	3.1 U	3.1 U	
		102-0231	2.5 to 3.5	3.7 U	3.7 U	3.7 U	3.7 U	2,600	1,500 J	3.7 U	3.7 U	3.7 U	
		102-0232	3.5 to 4.5	4.2 U	4.2 U	4.2 U	4.2 U	3,100	2,600 J	4.2 U	4.2 U	4.2 U	
		102-0233	4.5 to 5.5	3.4 U									
		102-0234	5.5 to 6.5	3.7 U									
		102-0235	6.5 to 7.5	4.4 U									
$\mu\text{g}/\text{kg}$ = micrograms per kilogram													
U = Not Detected													
J = Estimated Value													
UJ = Not Detected; Reporting Limit is Estimated													
NJ = Tentatively Identified with Approximate Concentration. Data are sufficiently definitive for Hazard Ranking System (HRS).													
Note: Red indicates PCB Aroclor result over 1,000 $\mu\text{g}/\text{kg}$.													

Table 2b

2014 Sediment Sampling Results for PCBs ($\mu\text{g}/\text{kg}$)

Black River Site, WA 0-102

Carthage, New York

Location	Date Collected	Sample Number	Depth Range (feet)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268
ERT-44	6/5/2014	102-0269	0 to 0.5	4.3 U								
		102-0270	0.5 to 1.5	4.4 U	500	270	4.4 U	4.4 U				
		102-0271	1.5 to 2.5	3.7 U								
		102-0272	2.5 to 3.5	3.6 U	46	3.6 U	3.6 U					
		102-0273	3.5 to 4.5	3.8 U	3.8 U	3.8 U	3.8 U	210 J	150 J	150 JN	3.8 U	3.8 U
		102-0274	4.5 to 5.5	3.9 U	3.9 U	3.9 U	3.9 U	3,300 JN	6,700	4,900	3.9 U	3.9 U
		102-0275	5.5 to 6.5	4.2 U	4.2 U	4.2 U	4.2 U	2,800 J	2,000 J	840 JN	4.2 U	4.2 U
		102-0276	6.5 to 7.5	4.1 U	4.1 U	4.1 U	4.1 U	540 J	750	440 J	4.1 U	4.1 U
ERT-45	6/5/2014	102-0277	0 to 0.5	6.3 U								
		102-0278	0.5 to 1.5	4.4 UJ	6.1 J	4.4 UJ	4.4 UJ					
		102-0279	1.5 to 2.5	4.5 U	4.5 U	4.5 U	4.5 U	360 U	180	96	4.5 U	4.5 U
		102-0280	2.5 to 3.5	4.8 U	4.8 U	4.8 U	4.8 U	250 U	120	46 JN	4.8 U	4.8 U
		102-0281	3.5 to 4.5	4.5 U								
		102-0282	4.5 to 5.5	3.9 U								
		102-0283	5.5 to 6.5	3.5 U								
		102-0284	6.5 to 7.5	4.5 U								
ERT-46	6/5/2014	102-0285	0 to 0.5	4.9 U								
		102-0286	0.5 to 1.5	4.2 U								
		102-0287	1.5 to 2.5	3.8 U	3.8 U	3.8 U	3.8 U	69 J	47 JN	17 JN	3.8 U	3.8 U
		102-0288	2.5 to 3.5	5.3 U	5.3 U	5.3 U	5.3 U	110,000 JN	96,000 J	34,000 JN	5.3 U	5.3 U
		102-0289	3.5 to 4.5	3.6 U								
		102-0290	4.5 to 5.5	3.8 U								
		102-0291	5.5 to 6.5	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U
		102-0292	6.5 to 7.5	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U

 $\mu\text{g}/\text{kg}$ = micrograms per kilogram

U = Not Detected

J = Estimated Value

UJ = Not Detected; Reporting Limit is Estimated

NJ = Tentatively Identified with Approximate Concentration. Data are sufficiently definitive for Hazard Ranking System (HRS).

Note: Red indicates PCB Aroclor result over 1,000 $\mu\text{g}/\text{kg}$.

Table 3a									
2015 Sediment Sampling Results for Metals of Concern (mg/kg)									
Black River Site, WA 0-102									
Carthage, New York									
Location	Date Collected	Sample Number	Analyte	Depth Interval (Feet)					
				0 to 0.5	0.5 to 1.5	1.5 to 2.5	2.5 to 3.5	3.5 to 4.5	
ERT-47	5/11/2015	102-0333	Barium	67.6 J	71.2 J	93.9 J	89.1 J	95.9 J	
		102-0333	Cadmium	1.10 J	1.40 J	1.70 J	1.70 J	1.90 J	
		102-0333	Chromium	16.6 J	16.4 J	20.3 J	18.9 J	19.7 J	
		102-0333	Cobalt	12.2 J	11.9 J	14.7 J	13.5 J	13.3 J	
		102-0333	Copper	19.9 J	21.1 J	26.2 J	23.8 J	26.7 J	
		102-0333	Lead	19.1 J	20.1 J	26.5 J	26.3 J	33.0 J	
		102-0333	Magnesium	4,420 J	4,290 J	5,280 J	4,760 J	4,940 J	
		102-0333	Manganese	305 J	292 J	363 J	317 J	331 J	
		102-0333	Mercury	0.20 UJ	0.23 UJ	0.23 UJ	0.20 UJ	0.19 UJ	
		102-0333	Nickel	20.9 J	20.0 J	25.1 J	23.0 J	23.3 J	
		102-0333	Selenium	7.40 UJ	6.40 UJ	6.90 UJ	7.00 UJ	7.20 UJ	
		102-0333	Silver	2.10 UJ	1.80 UJ	2.00 UJ	2.00 UJ	2.10 UJ	
		102-0333	Thallium	5.30 UJ	4.60 UJ	4.90 UJ	5.00 UJ	5.10 UJ	
ERT-48	5/12/2015	102-0354	Barium	47.6	47.4	77.5	66.6	72.1 J	
		102-0354	Cadmium	0.59 J	0.81	1.60	1.40	1.20 J	
		102-0354	Chromium	11.8	11.7	18.4	19.1	21.7 J	
		102-0354	Cobalt	9.90	9.00	12.5	11.5	10.9 J	
		102-0354	Copper	13.7	15.9	28.4	32.3	39.3 J	
		102-0354	Lead	17.0	21.9	44.8	54.1	56.9 J	
		102-0354	Magnesium	3,640	3,280	4,590	3,880	4,280 J	
		102-0354	Manganese	294	155	247	215	237 J	
		102-0354	Mercury	0.08 J	0.11 J	0.21	0.66	2.50 J	
		102-0354	Nickel	17.0	15.8	22.7	20.6	21.1 J	
		102-0354	Selenium	6.00 U	4.40 U	5.80 U	5.60 U	6.20 UJ	
		102-0354	Silver	1.70 U	1.30 U	1.70 U	1.60 U	1.80 UJ	
		102-0354	Thallium	4.30 U	3.10 U	4.10 U	4.00 U	4.40 UJ	
		102-0354	Vanadium	16.8	16.1	24.6	21.9	22.5 J	
		102-0354	Zinc	168	192	327	315	255 J	
mg/kg = milligrams per kilogram									
U = Not Detected									
J = Estimated Value									
UJ = Not Detected; Reporting Limit is Estimated									
NS = Not Sampled									

Table 3a								
2015 Sediment Sampling Results for Metals of Concern (mg/kg)								
Black River Site, WA 0-102								
Carthage, New York								
Location	Date Collected	Sample Number	Analyte	Depth Interval (Feet)				
				0 to 0.5	0.5 to 1.5	1.5 to 2.5	2.5 to 3.5	3.5 to 4.5
ERT-49	5/12/2015	102-0347	Barium	62.0 J	82.0 J	82.0 J	73.3 J	70.7 J
		102-0347	Cadmium	0.88 J	1.10 J	1.00 J	0.85 J	0.62 J
		102-0347	Chromium	17.5 J	24.1 J	24.1 J	20.5 J	17.9 J
		102-0347	Cobalt	9.20 J	13.4 J	13.3 J	11.6 J	10.7 J
		102-0347	Copper	27.4 J	42.6 J	47.8 J	37.6 J	37.1 J
		102-0347	Lead	34.6 J	60.6 J	55.8 J	50.5 J	39.4 J
		102-0347	Magnesium	4,080 J	5,930 J	5,620 J	5,280 J	5,120 J
		102-0347	Manganese	204 J	248 J	252 J	261 J	275 J
		102-0347	Mercury	1.60 J	0.79 J	0.78 J	0.36 J	0.15 J
		102-0347	Nickel	18.9 J	27.7 J	26.0 J	23.9 J	22.4 J
		102-0347	Selenium	8.70 UJ	5.80 UJ	5.20 UJ	6.10 UJ	7.10 UJ
		102-0347	Silver	2.50 UJ	1.60 UJ	1.50 UJ	1.70 UJ	2.00 UJ
		102-0347	Thallium	6.20 UJ	4.10 UJ	3.70 UJ	4.40 UJ	5.00 UJ
		102-0347	Vanadium	21.6 J	26.9 J	26.1 J	25.0 J	25.7 J
		102-0347	Zinc	185 J	220 J	211 J	168 J	138 J
ERT-50	5/12/2015	102-0361	Barium	69.7 J	62.4 J	74.4 J	68.5 J	NS
		102-0361	Cadmium	1.10 J	1.30 J	1.50 J	1.00 UJ	NS
		102-0361	Chromium	16.1 J	15.8 J	26.1 J	18.0 J	NS
		102-0361	Cobalt	12.7 J	13.1 J	11.5 J	10.6 J	NS
		102-0361	Copper	21.6 J	25.8 J	49.7 J	48.3 J	NS
		102-0361	Lead	19.2 J	34.6 J	82.0 J	55.8 J	NS
		102-0361	Magnesium	4,450 J	4,080 J	4,450 J	4,640 J	NS
		102-0361	Manganese	391 J	300 J	325 J	321 J	NS
		102-0361	Mercury	0.12 J	0.31 J	2.20 J	0.41 J	NS
		102-0361	Nickel	21.4 J	20.3 J	23.1 J	21.0 J	NS
		102-0361	Selenium	7.10 UJ	6.40 UJ	7.70 UJ	7.30 UJ	NS
		102-0361	Silver	2.00 UJ	1.80 UJ	2.20 UJ	2.10 UJ	NS
		102-0361	Thallium	5.10 U	4.60 UJ	5.50 UJ	5.20 UJ	NS
		102-0361	Vanadium	22.6 J	20.1 J	23.5 J	22.4 J	NS
		102-0361	Zinc	215 J	284 J	307 J	177 J	NS

mg/kg = milligrams per kilogram

U = Not Detected

J = Estimated Value

UJ = Not Detected; Reporting Limit is Estimated

NS = Not Sampled

Table 3a

2015 Sediment Sampling Results for Metals of Concern (mg/kg)

Black River Site, WA 0-102

Carthage, New York

Location	Date Collected	Sample Number	Analyte	Depth Interval (Feet)						
				0 to 0.5	0.5 to 1.5	1.5 to 2.5	2.5 to 3.5	3.5 to 4.5	4.5 to 5.5	5.5 to 6.5
ERT-51	5/12/2015	102-0367	Barium	106 J	41.7	18.0 J	NS	NS	NS	NS
		102-0367	Cadmium	6.30 J	0.87	0.51 U	NS	NS	NS	NS
		102-0367	Chromium	8.20 J	5.50	4.10	NS	NS	NS	NS
		102-0367	Cobalt	14.9 J	5.30 J	4.10 J	NS	NS	NS	NS
		102-0367	Copper	39.4 J	8.30	15.9	NS	NS	NS	NS
		102-0367	Lead	138 J	20.1	8.60	NS	NS	NS	NS
		102-0367	Magnesium	1,300 J	1,400	1,200	NS	NS	NS	NS
		102-0367	Manganese	907 J	180	112	NS	NS	NS	NS
		102-0367	Mercury	0.10 J	0.04 J	0.03 J	NS	NS	NS	NS
		102-0367	Nickel	12.9 J	9.30	7.10	NS	NS	NS	NS
		102-0367	Selenium	3.40 UJ	4.00 U	3.50 U	NS	NS	NS	NS
		102-0367	Silver	0.97 UJ	1.10 U	1.00 U	NS	NS	NS	NS
		102-0367	Thallium	1.10 J	2.90 U	2.50 U	NS	NS	NS	NS
		102-0367	Vanadium	15.5 J	8.50	6.20	NS	NS	NS	NS
		102-0367	Zinc	606 J	158	94.0	NS	NS	NS	NS
ERT-52	5/12/2015	102-0370	Barium	78.1 J	73.8 J	86.8 J	87.6 J	84.4 J	77.9 J	NS
		102-0370	Cadmium	1.30 J	1.50 J	1.80 J	1.80 J	1.60 J	1.60 J	NS
		102-0370	Chromium	17.4 J	17.0 J	26.5 J	35.2 J	33.6 J	29.3 J	NS
		102-0370	Cobalt	14.0 J	13.8 J	14.3 J	11.8 J	11.1 J	11.9 J	NS
		102-0370	Copper	24.6 J	24.9 J	40.8 J	50.6 J	52.9 J	54.7 J	NS
		102-0370	Lead	22.2 J	28.5 J	75.8 J	123 J	124 J	97.3 J	NS
		102-0370	Magnesium	4,790 J	4,540 J	5,060 J	4,470 J	4,380 J	4,650 J	NS
		102-0370	Manganese	504 J	363 J	351 J	294 J	236 J	244 J	NS
		102-0370	Mercury	0.10 J	0.17 J	0.18 J	0.62 J	1.40 J	2.60 J	NS
		102-0370	Nickel	23.2 J	22.5 J	26.8 J	24.0 J	23.6 J	23.7 J	NS
		102-0370	Selenium	8.40 UJ	7.40 UJ	8.00 UJ	8.90 UJ	7.90 UJ	7.70 UJ	NS
		102-0370	Silver	2.40 UJ	2.10 UJ	2.30 UJ	2.50 UJ	2.30 UJ	2.20 UJ	NS
		102-0370	Thallium	6.00 UJ	5.30 UJ	5.70 UJ	6.30 UJ	5.70 UJ	5.50 UJ	NS
		102-0370	Vanadium	25.2 J	24.0 J	28.5 J	27.9 J	26.8 J	26.1 J	NS
		102-0370	Zinc	237 J	270 J	415 J	358 J	348 J	295 J	NS

mg/kg = milligrams per kilogram

U = Not Detected

J = Estimated Value

UJ = Not Detected; Reporting Limit is Estimated

NS = Not Sampled

Table 3a								
2015 Sediment Sampling Results for Metals of Concern (mg/kg)								
Black River Site, WA 0-102								
Carthage, New York								
Location	Date Collected	Sample Number	Analyte	Depth Interval (Feet)				
				0 to 0.5	0.5 to 1.5	1.5 to 2.5	2.5 to 3.5	3.5 to 4.5
ERT-53	5/12/2015	102-0384	Barium	74.7 J	81.6 J	86.5 J	91.6 J	89.8 J
		102-0384	Cadmium	2.30 J	2.70 J	3.10 J	2.90 J	2.70 J
		102-0384	Chromium	17.2 J	18.3 J	22.1 J	29.6 J	30.2 J
		102-0384	Cobalt	13.0 J	13.9 J	14.8 J	13.4 J	13.1 J
		102-0384	Copper	22.2 J	24.4 J	30.4 J	46.7 J	48.6 J
		102-0384	Lead	19.8 J	28.1 J	38.2 J	81.7 J	83.7 J
		102-0384	Magnesium	4,780 J	4,870 J	5,640 J	5,250 J	5,490 J
		102-0384	Manganese	403 J	356 J	350 J	300 J	281 J
		102-0384	Mercury	0.26 UJ	0.23 UJ	0.21 UJ	0.58 J	2.30 J
		102-0384	Nickel	21.1 J	22.1 J	25.7 J	25.2 J	26.2 J
		102-0384	Selenium	8.30 UJ	6.10 UJ	6.00 UJ	7.60 UJ	7.70 UJ
		102-0384	Silver	2.40 UJ	1.70 UJ	1.70 UJ	2.20 UJ	2.20 UJ
		102-0384	Thallium	5.90 UJ	4.30 UJ	4.30 UJ	5.40 UJ	5.50 UJ
		102-0384	Vanadium	24.0 J	25.2 J	28.6 J	30.3 J	30.3 J
		102-0384	Zinc	224 J	267 J	351 J	387 J	328 J
ERT-54	5/12/2015	102-0376	Barium	36.9	50.2	69.6 J	60.9	59.3
		102-0376	Cadmium	0.57 U	0.70	2.20 J	0.83	0.76 U
		102-0376	Chromium	9.70	12.7	19.2 J	10.4	8.90
		102-0376	Cobalt	9.00	9.00	11.0 J	9.00	6.70 J
		102-0376	Copper	14.7	18.3	30.8 J	15.1	11.7
		102-0376	Lead	15.7	62.2	216 J	31.6	17.8
		102-0376	Magnesium	2,810	2,950	3,940 J	2,990	2,470
		102-0376	Manganese	199	186	229 J	173	166
		102-0376	Mercury	0.10 J	0.55 J	1.60 J	0.25	0.19
		102-0376	Nickel	15.0	15.4	18.9 J	14.8	12.1
		102-0376	Selenium	4.00 U	4.40 U	7.30 UJ	5.30 U	1.30 J
		102-0376	Silver	1.10 U	1.20 U	2.10 UJ	1.50 U	1.50 U
		102-0376	Thallium	2.80 U	3.10 U	5.20 UJ	3.80 U	3.80 U
		102-0376	Vanadium	12.3	13.8	20.2 J	13.4	11.6
		102-0376	Zinc	191	240	288 J	223	121

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Table 3a								
2015 Sediment Sampling Results for Metals of Concern (mg/kg)								
Black River Site, WA 0-102								
Carthage, New York								
Location	Date Collected	Sample Number	Analyte	Depth Interval (Feet)				
				0 to 0.5	0.5 to 1.5	1.5 to 2.5	2.5 to 3.5	3.5 to 4.5
ERT-55	5/12/2015	102-0383	Barium	70.7 J	NS	NS	NS	NS
		102-0383	Cadmium	2.20 J	NS	NS	NS	NS
		102-0383	Chromium	15.0 J	NS	NS	NS	NS
		102-0383	Cobalt	12.5 J	NS	NS	NS	NS
		102-0383	Copper	22.4 J	NS	NS	NS	NS
		102-0383	Lead	19.9 J	NS	NS	NS	NS
		102-0383	Magnesium	4,170 J	NS	NS	NS	NS
		102-0383	Manganese	384 J	NS	NS	NS	NS
		102-0383	Mercury	0.26 UJ	NS	NS	NS	NS
		102-0383	Nickel	18.4 J	NS	NS	NS	NS
		102-0383	Selenium	9.10 UJ	NS	NS	NS	NS
		102-0383	Silver	2.60 UJ	NS	NS	NS	NS
		102-0383	Thallium	6.50 UJ	NS	NS	NS	NS
		102-0383	Vanadium	22.3 J	NS	NS	NS	NS
		102-0383	Zinc	217 J	NS	NS	NS	NS
ERT-56	5/11/2015	102-0318	Barium	105 J	96.6 J	93.1 J	78.1 J	90.5 J
		102-0318	Cadmium	1.80 J	1.80 J	1.80 J	1.40 J	1.00 J
		102-0318	Chromium	25.6 J	28.4 J	29.1 J	25.3 J	24.3 J
		102-0318	Cobalt	16.0 J	14.0 J	15.2 J	12.9 J	13.1 J
		102-0318	Copper	32.6 J	45.9 J	49.2 J	39.7 J	42.1 J
		102-0318	Lead	35.9 J	63.9 J	61.6 J	55.5 J	50.1 J
		102-0318	Magnesium	6,350 J	5,640 J	5,880 J	5,350 J	6,240 J
		102-0318	Manganese	392 J	309 J	312 J	269 J	304 J
		102-0318	Mercury	0.17 J	1.10 J	2.00 J	0.46 J	0.36 J
		102-0318	Nickel	29.8 J	28.3 J	29.3 J	24.7 J	27.8 J
		102-0318	Selenium	9.00 UJ	7.10 UJ	6.40 UJ	6.70 UJ	6.80 UJ
		102-0318	Silver	2.60 UJ	2.00 UJ	1.80 UJ	1.90 UJ	1.90 UJ
		102-0318	Thallium	6.40 UJ	5.00 UJ	4.60 UJ	4.80 UJ	4.80 UJ
		102-0318	Vanadium	37.2 J	33.7 J	33.7 J	27.8 J	31.7 J
		102-0318	Zinc	327 J	357 J	337 J	237 J	192 J

mg/kg = milligrams per kilogram

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Table 3a									
2015 Sediment Sampling Results for Metals of Concern (mg/kg)									
Black River Site, WA 0-102									
Carthage, New York									
Location	Date Collected	Sample Number	Analyte	Depth Interval (Feet)					
				0 to 0.5	0.5 to 1.5	1.5 to 2.5	2.5 to 3.5	3.5 to 4.5	
ERT-57	5/11/2015	102-0326	Barium	74.2 J	82.6 J	75.4 J	114 J	82.2 J	
		102-0326	Cadmium	1.50 J	1.40 J	1.30 J	2.10 J	1.50 J	
		102-0326	Chromium	18.8 J	17.7 J	16.5 J	21.0 J	18.3 J	
		102-0326	Cobalt	14.4 J	13.0 J	12.8 J	15.0 J	12.8 J	
		102-0326	Copper	24.5 J	25.6 J	21.4 J	32.5 J	24.8 J	
		102-0326	Lead	20.8 J	22.6 J	22.0 J	48.8 J	28.2 J	
		102-0326	Magnesium	5,070 J	4,800 J	4,670 J	5,260 J	4,920 J	
		102-0326	Manganese	366 J	328 J	362 J	551 J	493 J	
		102-0326	Mercury	0.19 UJ	0.26 UJ	0.20 UJ	0.25 UJ	0.19 UJ	
		102-0326	Nickel	23.8 J	21.6 J	21.8 J	25.8 J	23.1 J	
		102-0326	Selenium	5.80 UJ	9.30 UJ	6.80 UJ	7.10 UJ	6.20 UJ	
		102-0326	Silver	1.70 UJ	2.60 UJ	1.90 UJ	2.00 UJ	1.80 UJ	
		102-0326	Thallium	4.10 UJ	6.60 UJ	4.80 UJ	5.10 UJ	4.40 UJ	
		102-0326	Vanadium	26.7 J	27.2 J	24.2 J	29.7 J	25.4 J	
		102-0326	Zinc	264 J	242 J	244 J	325 J	284 J	
ERT-58	5/11/2015	102-0311	Barium	76.7 J	78.6 J	91.0 J	107 J	94.9 J	
		102-0311	Cadmium	1.10 J	1.20 J	1.40 J	1.70 J	1.80 J	
		102-0311	Chromium	17.5 J	17.7 J	18.7 J	21.7 J	22.1 J	
		102-0311	Cobalt	12.6 J	11.8 J	13.4 J	14.6 J	14.7 J	
		102-0311	Copper	21.4 J	21.7 J	24.4 J	28.6 J	31.2 J	
		102-0311	Lead	18.1 J	19.8 J	23.6 J	29.4 J	35.9 J	
		102-0311	Magnesium	4,810 J	4,510 J	5,030 J	5,620 J	5,670 J	
		102-0311	Manganese	505 J	415 J	515 J	555 J	449 J	
		102-0311	Mercury	0.12 J	0.12 J	0.14 J	0.15 J	0.18 J	
		102-0311	Nickel	21.5 J	20.4 J	23.1 J	25.8 J	27.0 J	
		102-0311	Selenium	8.10 UJ	6.30 UJ	6.80 J	7.30 UJ	6.70 UJ	
		102-0311	Silver	2.30 UJ	1.80 UJ	2.00 UJ	2.10 UJ	1.90 UJ	
		102-0311	Thallium	5.80 UJ	4.50 UJ	4.90 UJ	5.20 UJ	4.80 UJ	
		102-0311	Vanadium	26.6 J	26.5 J	28.4 J	32.3 J	30.8 J	
		102-0311	Zinc	203 J	210 J	237 J	277 J	326 J	
mg/kg = milligrams per kilogram									
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Table 3a									
2015 Sediment Sampling Results for Metals of Concern (mg/kg)									
Black River Site, WA 0-102									
Carthage, New York									
Location	Date Collected	Sample Number	Analyte	Depth Interval (Feet)					
				0 to 0.5	0.5 to 1.5	1.5 to 2.5	2.5 to 3.5	3.5 to 4.5	
ERT-59	5/11/2015	102-0301	Barium	78.5 J	103 J	115 J	113 J	101 J	
		102-0301	Cadmium	1.20 J	2.00 J	2.70 J	2.30 J	2.00 J	
		102-0301	Chromium	18.3 J	23.6 J	30.2 J	39.7 J	31.6 J	
		102-0301	Cobalt	12.8 J	16.2 J	17.1 J	14.1 J	14.3 J	
		102-0301	Copper	22.3 J	30.1 J	42.2 J	65.8 J	59.9 J	
		102-0301	Lead	26.6 J	151 J	90.7 J	143 J	83.9 J	
		102-0301	Magnesium	4,660 J	5,770 J	5,980 J	5,240 J	5,770 J	
		102-0301	Manganese	467 J	442 J	378 J	334 J	334 J	
		102-0301	Mercury	0.11 J	0.16 J	0.26 J	1.60 J	1.90 J	
		102-0301	Nickel	22.0 J	27.4 J	30.3 J	27.9 J	27.9 J	
		102-0301	Selenium	8.60 UJ	8.40 UJ	8.50 UJ	9.60 UJ	8.30 UJ	
		102-0301	Silver	2.50 UJ	2.40 UJ	2.40 UJ	2.80 UJ	2.40 UJ	
		102-0301	Thallium	6.10 UJ	6.00 UJ	6.00 UJ	6.90 UJ	5.90 UJ	
		102-0301	Vanadium	26.5 J	34.4 J	37.9 J	35.7 J	33.4 J	
		102-0301	Zinc	228 J	329 J	509 J	490 J	348 J	
ERT-60	5/11/2015	102-0309	Barium	105 J	NS	NS	NS	NS	
		102-0309	Cadmium	1.80 J	NS	NS	NS	NS	
		102-0309	Chromium	24.3 J	NS	NS	NS	NS	
		102-0309	Cobalt	16.2 J	NS	NS	NS	NS	
		102-0309	Copper	29.7 J	NS	NS	NS	NS	
		102-0309	Lead	34.2 J	NS	NS	NS	NS	
		102-0309	Magnesium	6,120 J	NS	NS	NS	NS	
		102-0309	Manganese	555 J	NS	NS	NS	NS	
		102-0309	Mercury	0.15 J	NS	NS	NS	NS	
		102-0309	Nickel	28.2 J	NS	NS	NS	NS	
		102-0309	Selenium	10.0 UJ	NS	NS	NS	NS	
		102-0309	Silver	2.80 UJ	NS	NS	NS	NS	
		102-0309	Thallium	7.10 UJ	NS	NS	NS	NS	
		102-0309	Vanadium	34.8 J	NS	NS	NS	NS	
		102-0309	Zinc	325 J	NS	NS	NS	NS	
mg/kg = milligrams per kilogram									
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Table 3a									
2015 Sediment Sampling Results for Metals of Concern (mg/kg)									
Black River Site, WA 0-102									
Carthage, New York									
Location	Date Collected	Sample Number	Analyte	Depth Interval (Feet)					
				0 to 0.5	0.5 to 1.5	1.5 to 2.5	2.5 to 3.5	3.5 to 4.5	
ERT-61	5/12/2015	102-0340	Barium	60.4 J	68.7 J	67.4 J	68.1 J	62.4	
		102-0340	Cadmium	1.00 J	1.30 J	0.62 J	0.58 J	0.30 J	
		102-0340	Chromium	15.9 J	19.7 J	18.5 J	17.6 J	15.6	
		102-0340	Cobalt	10.8 J	10.8 J	10.8 J	10.5 J	9.30	
		102-0340	Copper	20.2 J	31.0 J	32.1 J	34.5 J	27.6	
		102-0340	Lead	22.8 J	48.1 J	41.1 J	36.4 J	22.5	
		102-0340	Magnesium	4,210 J	4,240 J	4,630 J	4,950 J	4,610	
		102-0340	Manganese	211 J	189 J	214 J	251 J	251	
		102-0340	Mercury	0.22 UJ	0.66 J	0.40 J	0.12 J	0.11 J	
		102-0340	Nickel	19.4 J	20.8 J	21.5 J	22.0 J	20.3	
		102-0340	Selenium	5.70 UJ	6.30 UJ	6.80 UJ	7.10 UJ	5.40 U	
		102-0340	Silver	1.60 UJ	1.80 UJ	1.90 UJ	2.00 UJ	1.50 U	
		102-0340	Thallium	4.10 UJ	4.50 UJ	4.90 UJ	5.10 UJ	3.90 U	
		102-0340	Vanadium	23.4 J	25.5 J	23.5 J	24.3 J	22.4	
		102-0340	Zinc	219 J	256 J	171 J	134	98.1	
FD-11		102-0310	Barium	89.8 J	NS	NS	NS	NS	
		102-0310	Cadmium	1.50 J	NS	NS	NS	NS	
		102-0310	Chromium	20.9 J	NS	NS	NS	NS	
		102-0310	Cobalt	13.1 J	NS	NS	NS	NS	
		102-0310	Copper	24.5 J	NS	NS	NS	NS	
		102-0310	Lead	27.3 J	NS	NS	NS	NS	
		102-0310	Magnesium	5,020 J	NS	NS	NS	NS	
		102-0310	Manganese	478 J	NS	NS	NS	NS	
		102-0310	Mercury	0.16 J	NS	NS	NS	NS	
		102-0310	Nickel	23.1 J	NS	NS	NS	NS	
		102-0310	Selenium	3.10 UJ	NS	NS	NS	NS	
		102-0310	Silver	0.89 UJ	NS	NS	NS	NS	
		102-0310	Thallium	2.20 UJ	NS	NS	NS	NS	
		102-0310	Vanadium	29.2 J	NS	NS	NS	NS	
		102-0310	Zinc	254 J	NS	NS	NS	NS	
mg/kg = milligrams per kilogram									
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Table 3a								
2015 Sediment Sampling Results for Metals of Concern (mg/kg)								
Black River Site, WA 0-102								
Carthage, New York								
Location	Date Collected	Sample Number	Analyte	Depth Interval (Feet)				
				0 to 0.5	0.5 to 1.5	1.5 to 2.5	2.5 to 3.5	3.5 to 4.5
FD-12	102-0325	Barium	97.1 J	NS	NS	NS	NS	NS
	102-0325	Cadmium	1.8 J	NS	NS	NS	NS	NS
	102-0325	Chromium	27.8 J	NS	NS	NS	NS	NS
	102-0325	Cobalt	14.1 J	NS	NS	NS	NS	NS
	102-0325	Copper	45 J	NS	NS	NS	NS	NS
	102-0325	Lead	64.3 J	NS	NS	NS	NS	NS
	102-0325	Magnesium	5,730 J	NS	NS	NS	NS	NS
	102-0325	Manganese	312 J	NS	NS	NS	NS	NS
	102-0325	Mercury	1.1 J	NS	NS	NS	NS	NS
	102-0325	Nickel	28 J	NS	NS	NS	NS	NS
	102-0325	Selenium	7.8 UJ	NS	NS	NS	NS	NS
	102-0325	Silver	2.2 UJ	NS	NS	NS	NS	NS
	102-0325	Thallium	5.6 UJ	NS	NS	NS	NS	NS
	102-0325	Vanadium	34.1 J	NS	NS	NS	NS	NS
	102-0325	Zinc	367	NS	NS	NS	NS	NS
FD-13	102-0363	Barium	65.3 J	NS	NS	NS	NS	NS
	102-0363	Cadmium	1.3 J	NS	NS	NS	NS	NS
	102-0363	Chromium	15.7 J	NS	NS	NS	NS	NS
	102-0363	Cobalt	12 J	NS	NS	NS	NS	NS
	102-0363	Copper	23.5 J	NS	NS	NS	NS	NS
	102-0363	Lead	28.9 J	NS	NS	NS	NS	NS
	102-0363	Magnesium	3,990 J	NS	NS	NS	NS	NS
	102-0363	Manganese	324 J	NS	NS	NS	NS	NS
	102-0363	Mercury	0.19 J	NS	NS	NS	NS	NS
	102-0363	Nickel	19.7 J	NS	NS	NS	NS	NS
	102-0363	Selenium	6.9 UJ	NS	NS	NS	NS	NS
	102-0363	Silver	2 UJ	NS	NS	NS	NS	NS
	102-0363	Thallium	4.9 UJ	NS	NS	NS	NS	NS
	102-0363	Vanadium	19.6 J	NS	NS	NS	NS	NS
	102-0363	Zinc	246 J	NS	NS	NS	NS	NS
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Table 3a								
2015 Sediment Sampling Results for Metals of Concern (mg/kg)								
Black River Site, WA 0-102								
Carthage, New York								
Location	Date Collected	Sample Number	Analyte	Depth Interval (Feet)				
				0 to 0.5	0.5 to 1.5	1.5 to 2.5	2.5 to 3.5	3.5 to 4.5
FD-14	102-0365	Barium	73.7 J	NS	NS	NS	NS	NS
	102-0365	Cadmium	1.4 J	NS	NS	NS	NS	NS
	102-0365	Chromium	26.1 J	NS	NS	NS	NS	NS
	102-0365	Cobalt	11.2 J	NS	NS	NS	NS	NS
	102-0365	Copper	59.1 J	NS	NS	NS	NS	NS
	102-0365	Lead	82.1 J	NS	NS	NS	NS	NS
	102-0365	Magnesium	4,360 J	NS	NS	NS	NS	NS
	102-0365	Manganese	310 J	NS	NS	NS	NS	NS
	102-0365	Mercury	2.1 J+	NS	NS	NS	NS	NS
	102-0365	Nickel	22.2 J	NS	NS	NS	NS	NS
	102-0365	Selenium	8.1 UJ	NS	NS	NS	NS	NS
	102-0365	Silver	2.3 UJ	NS	NS	NS	NS	NS
	102-0365	Thallium	5.8 UJ	NS	NS	NS	NS	NS
	102-0365	Vanadium	22.6 J	NS	NS	NS	NS	NS
	102-0365	Zinc	303 J	NS	NS	NS	NS	NS
FD-15	102-0378	Barium	50.2	NS	NS	NS	NS	NS
	102-0378	Cadmium	0.64 U	NS	NS	NS	NS	NS
	102-0378	Chromium	11.2	NS	NS	NS	NS	NS
	102-0378	Cobalt	8.9	NS	NS	NS	NS	NS
	102-0378	Copper	20.6	NS	NS	NS	NS	NS
	102-0378	Lead	34.5	NS	NS	NS	NS	NS
	102-0378	Magnesium	2,760	NS	NS	NS	NS	NS
	102-0378	Manganese	180	NS	NS	NS	NS	NS
	102-0378	Mercury	0.13 J	NS	NS	NS	NS	NS
	102-0378	Nickel	14.5	NS	NS	NS	NS	NS
	102-0378	Selenium	4.5 U	NS	NS	NS	NS	NS
	102-0378	Silver	1.3 U	NS	NS	NS	NS	NS
	102-0378	Thallium	3.2 U	NS	NS	NS	NS	NS
	102-0378	Vanadium	13.1	NS	NS	NS	NS	NS
	102-0378	Zinc	198	NS	NS	NS	NS	NS
mg/kg = milligrams per kilogram								
U = Not Detected								
J = Estimated Value								
UJ = Not Detected; Reporting Limit is Estimated								
NS = Not Sampled								

Table 3b

2014 Sediment Sampling Results for Metals of Concern (mg/kg)

Black River Site, WA 0-102

Carthage, New York

Location	Date Collected	Sample Number	Analyte	Depth Interval (Feet)							
				0 to 0.5	0.5 to 1.5	1.5 to 2.5	2.5 to 3.5	3.5 to 4.5	4.5 to 5.5	5.5 to 6.5	6.5 to 7.5
ERT-38	6/4/2014	102-0236	Barium	55.5 J	51.9 J	75.6	55.7	44.6	36.2	33.7	38.1
		102-0236	Cadmium	1.5 J	1.2 J	0.41 J	0.5	0.69	0.6	0.56	0.75
		102-0236	Chromium	14.8 J	18.9 J	12.5	13	12.1	10.8	12.1	12.3
		102-0236	Cobalt	10.7 J	8.6 J	9	9.3	9.3	8.5	8	8.9
		102-0236	Copper	20.1 J	25.2 J	6.4	9.4	8.7	8.4	8.5	9.6
		102-0236	Lead	26.1 J	54.9 J	6.9	6.4	7.2	6.2	6.2	7.6
		102-0236	Magnesium	3,500 J	3,130 J	2,740	3,110	2,690	2,460	2,730	2,840
		102-0236	Manganese	244 J	199 J	211	235	227	216	218	249
		102-0236	Mercury	0.11 J	0.15 J	0.029 J	0.028 J	0.025 J	0.021 J	0.022 J	0.021 J
		102-0236	Nickel	17.7 J	16.6 J	12.6	16.1	15.7	14	14.6	17.1
		102-0236	Selenium	0.34 J	0.65 J	0.26 J	0.29 J	0.25 J	0.16 J	0.15 J	0.19 J
		102-0236	Silver	1.7 UJ	1.7 UJ	1 U	0.9 U	0.92 U	0.95 U	0.93 U	0.92 U
		102-0236	Thallium	4.4 UJ	4.1 UJ	2.6 U	2.3 U	2.3 U	2.4 U	2.3 U	2.3 U
		102-0236	Vanadium	19.3 J	19.6 J	22.4	21.8	20.5	18.7	19.5	20.3
		102-0236	Zinc	192 J	211 J	75.7	60.9	60.1	48.4	49.5	54.4
ERT-39	6/4/2014	102-0244	Barium	60.2 J	52.1 J	59.5 J	55.2	67.4 J	53.2 J	NS	NS
		102-0244	Cadmium	2.2 J	1.4 J	1.5 J	0.62 J	0.92 J	0.43 J	NS	NS
		102-0244	Chromium	13.1 J	11.6 J	18.6 J	12.5	13.3 J	7.1 J	NS	NS
		102-0244	Cobalt	13.6 J	8.9 J	8.9 J	5.4 J	8.3 J	3.6 J	NS	NS
		102-0244	Copper	23.8 J	29.4 J	29.7 J	70.6	77.6 J	55 J	NS	NS
		102-0244	Lead	29.4 J	26.1 J	59.6 J	88.7	117 J	269 J	NS	NS
		102-0244	Magnesium	3,060 J	2,760 J	2,980 J	2,480	2,790 J	1,340 J	NS	NS
		102-0244	Manganese	375 J	290 J	186 J	119	140 J	84.3 J	NS	NS
		102-0244	Mercury	0.12 J	0.15 J	0.31 J	0.54	0.45 J	0.14 J	NS	NS
		102-0244	Nickel	18.1 J	14.1 J	16.8 J	12.3	14.6 J	7.6 J	NS	NS
		102-0244	Selenium	0.4 J	5.7 UJ	0.61 J	0.27 J	5.2 UJ	6.1 UJ	NS	NS
		102-0244	Silver	2.4 UJ	1.6 UJ	1.6 UJ	1 J	1.5 UJ	1.7 UJ	NS	NS
		102-0244	Thallium	5.9 UJ	4.1 UJ	4 UJ	3.7 U	3.7 UJ	4.3 UJ	NS	NS
		102-0244	Vanadium	19.9 J	16.4 J	19 J	14.7	17.9 J	11.7 J	NS	NS
		102-0244	Zinc	301 J	177 J	235 J	121	203 J	122 J	NS	NS

mg/kg = milligrams per kilogram

U = Not Detected

J = Estimated Value

UJ = Not Detected; Reporting Limit is Estimated

NS = Not Sampled

Table 3b

2014 Sediment Sampling Results for Metals of Concern (mg/kg)

Black River Site, WA 0-102

Carthage, New York

Location	Date Collected	Sample Number	Analyte	Depth Interval (Feet)							
				0 to 0.5	0.5 to 1.5	1.5 to 2.5	2.5 to 3.5	3.5 to 4.5	4.5 to 5.5	5.5 to 6.5	6.5 to 7.5
ERT-40	6/4/2014	102-0201	Barium	37.2	49.3	56.8 J	73.9 J	77.6 J	68.2	78.3 J	59 J
		102-0201	Cadmium	0.99	1.2	1.6 J	2 J	1.7 J	3.3	0.95 J	0.68 J
		102-0201	Chromium	9	8.6	14.3 J	21.2 J	22.5 J	24.2	14.9 J	13.4 J
		102-0201	Cobalt	8.1	7.8	10.2 J	10.8 J	10.5 J	8.8	9.1 J	8 J
		102-0201	Copper	11.4	14.9	27.7 J	64.7 J	52.5 J	36.4	38.8 J	41.9 J
		102-0201	Lead	16.5	34.2	52 J	111 J	85.3 J	150	104 J	61.4 J
		102-0201	Magnesium	2,440	2,290	3,200 J	3,380 J	3,920 J	3,510	3,980 J	3,620 J
		102-0201	Manganese	179	165	209 J	214 J	237 J	203	252 J	220 J
		102-0201	Mercury	0.063 J	0.12 J	0.21 J	1.5 J	2.5 J	0.38	0.15 J	0.085 J
		102-0201	Nickel	12.2	12.1	17.4 J	19.3 J	20.8 J	16.5	17.9 J	15.9 J
		102-0201	Selenium	0.57 J	0.61 J	0.61 J	0.91 J	0.68 J	0.37 J	0.59 J	0.52 J
		102-0201	Silver	1.2 U	1.2 U	1.6 UJ	0.1 J	0.21 J	1.3 U	1.9 UJ	1.9 UJ
		102-0201	Thallium	2.9 U	3 U	3.9 UJ	4.6 UJ	4.4 UJ	3.2 U	4.9 UJ	4.6 UJ
		102-0201	Vanadium	15.7	12.7	19.6 J	22.1 J	22.5 J	17.8	21.1 J	19.5 J
		102-0201	Zinc	148	178	258 J	303 J	255 J	149	152 J	108 J
ERT-41	6/4/2014	102-0210	Barium	91.2 J	61.8 J	63.2 J	66.5 J	78 J	69.9 J	88.4 J	56.8 J
		102-0210	Cadmium	2.1 J	1.9 J	1.8 J	2.1 J	1.9 J	1.7 J	2.3 J	0.92 J
		102-0210	Chromium	15.3 J	13 J	18.4 J	17.9 J	23.8 J	21.7 J	30.7 J	16.2 J
		102-0210	Cobalt	11.1 J	11 J	12.1 J	11.8 J	11 J	10.4 J	9.6 J	8.6 J
		102-0210	Copper	26.7 J	22.9 J	31.6 J	29.9 J	63.4 J	48.7 J	84.1 J	57.5 J
		102-0210	Lead	38.5 J	40.8 J	62.2 J	52.2 J	145 J	72.3 J	177 J	81.2 J
		102-0210	Magnesium	3,810 J	3,400 J	4,030 J	3,850 J	3,840 J	3,960 J	3,490 J	3,020 J
		102-0210	Manganese	267 J	240 J	248 J	228 J	229 J	225 J	232 J	181 J
		102-0210	Mercury	0.15 J	0.13 J	0.24 J	0.22 J	1.2 J	2.2 J	1.1 J	0.51 J
		102-0210	Nickel	18.9 J	17.5 J	21.8 J	20.8 J	21.1 J	20.8 J	18 J	16 J
		102-0210	Selenium	0.37 J	2.9 J	3.3 J	3.4 J	4 J	3.1 J	2.9 J	2.3 J
		102-0210	Silver	2.2 UJ	1.5 UJ	1.6 UJ	1.7 UJ	1.8 UJ	1.7 UJ	0.56 J	1.6 UJ
		102-0210	Thallium	5.4 UJ	3.8 UJ	4 UJ	4.3 UJ	4.5 UJ	4.3 UJ	4.5 UJ	3.9 UJ
		102-0210	Vanadium	22.4 J	17.6 J	20.3 J	22.3 J	23.6 J	21 J	18.6 J	15.2 J
		102-0210	Zinc	240 J	221 J	307 J	313 J	340 J	245 J	214 J	155 J

mg/kg = milligrams per kilogram

U = Not Detected

J = Estimated Value

UJ = Not Detected; Reporting Limit is Estimated

NS = Not Sampled

Table 3b

2014 Sediment Sampling Results for Metals of Concern (mg/kg)

Black River Site, WA 0-102

Carthage, New York

Location	Date Collected	Sample Number	Analyte	Depth Interval (Feet)							
				0 to 0.5	0.5 to 1.5	1.5 to 2.5	2.5 to 3.5	3.5 to 4.5	4.5 to 5.5	5.5 to 6.5	6.5 to 7.5
ERT-42	6/4/2014	102-0219	Barium	68.2 J	65.7 J	79.5 J	75.2 J	82.8 J	74 J	82.7 J	71.5 J
		102-0219	Cadmium	2.2 J	2 J	2.1 J	1.8 J	1.7 J	2.3 J	1.7 J	1.1 J
		102-0219	Chromium	18.2 J	15.1 J	22.8 J	21.9 J	22.7 J	23 J	24 J	16.5 J
		102-0219	Cobalt	12.2 J	10 J	11.3 J	11.2 J	12.3 J	9.9 J	9.7 J	9.8 J
		102-0219	Copper	39.8 J	31.5 J	42.6 J	46.6 J	51.5 J	74.3 J	50.3 J	56.9 J
		102-0219	Lead	69.6 J	51.2 J	77.3 J	72.6 J	65.4 J	83.2 J	110 J	67.2 J
		102-0219	Magnesium	3,960 J	3,210 J	4,150 J	4,150 J	4,450 J	4,200 J	3,920 J	4,110 J
		102-0219	Manganese	248 J	221 J	274 J	292 J	287 J	253 J	274 J	253 J
		102-0219	Mercury	0.25 J	0.3 J	0.78 J	2.5 J	2 J	0.92 J	0.56 J	0.38 J
		102-0219	Nickel	22.4 J	17.7 J	22.6 J	21.8 J	22.8 J	19.9 J	19.9 J	20 J
		102-0219	Selenium	3.1 J	2.6 J	0.44 J	0.59 J	1.3 J	0.71 J	0.48 J	0.5 J
		102-0219	Silver	1.8 UJ	1.8 UJ	1.9 UJ	0.11 J	1.9 UJ	1 J	0.15 J	1.8 UJ
		102-0219	Thallium	4.6 UJ	4.4 UJ	4.6 UJ	4.4 UJ	4.7 UJ	4.5 UJ	4.3 UJ	4.5 UJ
		102-0219	Vanadium	23.2 J	20.3 J	25.3 J	25.2 J	24.9 J	20.7 J	20.9 J	20.5 J
		102-0219	Zinc	353 J	289 J	320 J	271 J	219 J	201 J	185 J	176 J
ERT-43	6/4/2014	102-0228	Barium	51.7 J	61.9 J	61.4	76.5 J	91 J	68.5	70.9 J	58 J
		102-0228	Cadmium	1.3 J	1.5 J	1.5	1.7 J	1.8 J	1.3	1.1 J	0.82 J
		102-0228	Chromium	13.7 J	14.5 J	17.1	22.7 J	24.3 J	17.6	16.2 J	12.7 J
		102-0228	Cobalt	11.4 J	11.1 J	12	12.5 J	10.7 J	10.2	10 J	7.8 J
		102-0228	Copper	16.8 J	22.3 J	25.9	52.1 J	51.5 J	36.9	46.7 J	48.1 J
		102-0228	Lead	17.3 J	32.2 J	37	81.7 J	85.6 J	86.3	97.7 J	68.1 J
		102-0228	Magnesium	3,820 J	3,680 J	4,460	4,410 J	3,650 J	3,790	3,870 J	3,370 J
		102-0228	Manganese	334 J	292 J	269	242 J	241 J	247	245 J	223 J
		102-0228	Mercury	0.081 J	0.26 J	0.16 J	0.61 J	2.9 J	0.65	0.38 J	0.14 J
		102-0228	Nickel	19.1 J	18.5 J	23	24.3 J	20 J	18.7	19.3 J	15.8 J
		102-0228	Selenium	0.5 J	0.64 J	0.51 J	0.67 J	0.44 J	0.46 J	0.63 J	7.3 UJ
		102-0228	Silver	1.5 UJ	1.8 UJ	1.5 U	1.7 UJ	1.9 UJ	1.6 U	1.6 UJ	2.1 UJ
		102-0228	Thallium	3.8 UJ	4.4 UJ	3.7 U	4.3 UJ	4.6 UJ	3.9 U	4 UJ	5.2 UJ
		102-0228	Vanadium	18.8 J	19.9 J	22.3	25.7 J	22.1 J	20.2	20.7 J	17.1 J
		102-0228	Zinc	201 J	217 J	258	283 J	327 J	193	170 J	149 J

mg/kg = milligrams per kilogram

U = Not Detected

J = Estimated Value

UJ = Not Detected; Reporting Limit is Estimated

NS = Not Sampled

Table 3b

2014 Sediment Sampling Results for Metals of Concern (mg/kg)

Black River Site, WA 0-102

Carthage, New York

Location	Date Collected	Sample Number	Analyte	Depth Interval (Feet)							
				0 to 0.5	0.5 to 1.5	1.5 to 2.5	2.5 to 3.5	3.5 to 4.5	4.5 to 5.5	5.5 to 6.5	6.5 to 7.5
ERT-44	6/5/2014	102-0269	Barium	66.2 J	62.5 J	73.6 J	74.5 J	73.4 J	79.3 J	72.4 J	79.6 J
		102-0269	Cadmium	1.5 J	1.7 J	2.5 J	2 J	2.2 J	2 J	1.6 J	1.9 J
		102-0269	Chromium	14.7 J	14 J	14.4 J	15.8 J	17.8 J	23.7 J	27.3 J	27.4 J
		102-0269	Cobalt	11.9 J	10.8 J	11.7 J	12.2 J	12.5 J	11 J	9.2 J	10.5 J
		102-0269	Copper	20 J	19.1 J	20.5 J	22.1 J	26.6 J	38.4 J	41.1 J	45.8 J
		102-0269	Lead	19.4 J	20.9 J	28.5 J	29.2 J	38.4 J	86.4 J	99 J	90.9 J
		102-0269	Magnesium	4,080 J	3,670 J	3,480 J	3,890 J	4,060 J	3,640 J	3,140 J	4,030 J
		102-0269	Manganese	575 J	288 J	300 J	293 J	287 J	256 J	249 J	364 J
		102-0269	Mercury	0.12 J	0.12 J	0.14 J	0.15 J	0.22 J	0.26 J	0.81 J	3 J
		102-0269	Nickel	20.2 J	18.4 J	18.7 J	20.3 J	22.4 J	22.8 J	18.4 J	21.3 J
		102-0269	Selenium	6.7 UJ	7 UJ	3.3 J	3.5 J	3.1 J	3 J	3.1 J	3.6 J
		102-0269	Silver	1.9 UJ	2 UJ	1.8 UJ	1.8 UJ	1.8 UJ	1.6 UJ	1.9 UJ	1.8 UJ
		102-0269	Thallium	4.8 UJ	5 UJ	4.6 UJ	4.5 UJ	4.5 UJ	4.1 UJ	4.8 UJ	4.6 UJ
		102-0269	Vanadium	21.3 J	20.7 J	21.3 J	21.6 J	22.6 J	22.7 J	20.3 J	23.5 J
		102-0269	Zinc	186 J	197 J	251 J	239 J	290 J	454 J	277 J	275 J
ERT-45	6/5/2014	102-0277	Barium	54.4 J	79.7 J	83.4 J	81.9 J	74.5 J	85.9 J	67.3 J	60.8 J
		102-0277	Cadmium	1.8 J	1.8 J	1.8 J	2 J	1.7 J	1.9 J	1.3 J	0.97 J
		102-0277	Chromium	14.1 J	25.1 J	26 J	35.6 J	21.9 J	22 J	19.1 J	14.5 J
		102-0277	Cobalt	12.4 J	11 J	12.8 J	10.5 J	11.1 J	10.3 J	10.2 J	8.8 J
		102-0277	Copper	18 J	41.2 J	40.4 J	42.4 J	37 J	36.9 J	32.4 J	30.8 J
		102-0277	Lead	23.1 J	75.7 J	76.6 J	59.6 J	46.1 J	78.9 J	46.9 J	48.2 J
		102-0277	Magnesium	3,490 J	4,140 J	4,650 J	3,760 J	4,240 J	3,940 J	4,180 J	3,970 J
		102-0277	Manganese	284 J	279 J	317 J	303 J	322 J	319 J	298 J	291 J
		102-0277	Mercury	0.11 J	0.77 J	0.56 J	2.4 J	0.82 J	0.48 J	0.33 J	0.18 J
		102-0277	Nickel	22.8 J	22.9 J	25.5 J	20.2 J	21.3 J	19.3 J	19.6 J	17.6 J
		102-0277	Selenium	3 J	3.8 J	3.4 J	3.2 J	3.6 J	0.76 J	0.8 J	7.2 UJ
		102-0277	Silver	0.89 UJ	2.1 UJ	2.1 UJ	2.1 UJ	2 U	1.9 UJ	1.7 UJ	2 UJ
		102-0277	Thallium	2.2 UJ	5.3 UJ	5.3 UJ	5.2 UJ	5.1 U	4.7 UJ	4.1 UJ	5.1 UJ
		102-0277	Vanadium	19.5 J	25.3 J	28.2 J	22.9 J	22.2 J	21.6 J	21.3 J	20.4 J
		102-0277	Zinc	200 J	309 J	297 J	249 J	199 J	224 J	166 J	146 J

mg/kg = milligrams per kilogram

U = Not Detected

J = Estimated Value

UJ = Not Detected; Reporting Limit is Estimated

NS = Not Sampled

Table 3b

2014 Sediment Sampling Results for Metals of Concern (mg/kg)

Black River Site, WA 0-102

Carthage, New York

Location	Date Collected	Sample Number	Analyte	Depth Interval (Feet)								
				0 to 0.5	0.5 to 1.5	1.5 to 2.5	2.5 to 3.5	3.5 to 4.5	4.5 to 5.5	5.5 to 6.5	6.5 to 7.5	
ERT-46	6/5/2014	102-0285	Barium	62.6 J	60.8 J	68.6 J	76.1 J	64.1 J	62 J	61 J	48.9 J	
		102-0285	Cadmium	1.4 J	1.6 J	1.9 J	2.2 J	1.6 J	1.1 J	0.99 J	0.79 UJ	
		102-0285	Chromium	15.2 J	14.5 J	15.8 J	23.1 J	20.3 J	17.6 J	15.3 J	12.9 J	
		102-0285	Cobalt	11.3 J	12.2 J	11.4 J	12.6 J	11.5 J	9.9 J	8.6 J	7.7 J	
		102-0285	Copper	19.6 J	19.2 J	22.2 J	40.2 J	33.5 J	29.4 J	32.7 J	24.3 J	
		102-0285	Lead	19.7 J	20.1 J	31.5 J	75.3 J	54.3 J	45.4 J	44.2 J	26.6 J	
		102-0285	Magnesium	3,940 J	3,720 J	3,770 J	3,790 J	3,900 J	4,130 J	4,000 J	3,530 J	
		102-0285	Manganese	384 J	238 J	216 J	220 J	220 J	227 J	223 J	196 J	
		102-0285	Mercury	0.11 J	0.082 J	0.55 J	0.73 J	0.6 J	0.2 J	0.13 J	0.074 J	
		102-0285	Nickel	19.2 J	18.6 J	19.6 J	22.2 J	21.8 J	19.4 J	17.8 J	16.3 J	
		102-0285	Selenium	8.2 UJ	0.64 J	0.32 J	0.81 J	0.68 J	0.56 J	0.68 J	2.5 J	
		102-0285	Silver	2.3 UJ	2.2 UJ	1.8 UJ	1.8 UJ	1.4 UJ	1.6 UJ	2 UJ	1.6 UJ	
		102-0285	Thallium	5.8 UJ	5.6 UJ	4.5 UJ	4.6 UJ	3.6 UJ	4 UJ	5.1 UJ	3.9 UJ	
		102-0285	Vanadium	22 J	21.7 J	21.6 J	24.2 J	21 J	21.6 J	20.9 J	17.6 J	
		102-0285	Zinc	200 J	214 J	247	364 J	234 J	149 J	138 J	99 J	
mg/kg = milligrams per kilogram												
U = Not Detected												
J = Estimated Value												
UJ = Not Detected; Reporting Limit is Estimated												
NS = Not Sampled												

Table 4										
2015 Sediment Sampling Results for Grain Size and Total Organic Carbon										
Black River Site, WA 0-102										
Carthage, New York										
Location	Sublocation	Sample Depth (feet)	Sample Number	Total Organic Carbon (mg/g)	Clay (%)	Silt (%)	Fine Sand (%)	Medium Sand (%)	Coarse Sand (%)	Gravel (%)
ERT-48	A	0 to 0.5	102-0354	38	-	-	-	-	-	-
ERT-48	B	0.5 to 1.5	102-0355	34	5.33	39.6	50.5	4.54	0.00	0.00
ERT-48	C	1.5 to 2.5	102-0356	56	8.87	62.0	27.6	1.61	0.00	0.00
ERT-48	D	2.5 to 3.5	102-0357	63	8.21	51.9	38.0	1.84	0.00	0.00
ERT-48	E	3.5 to 4.5	102-0358	79	6.93	66.0	24.9	2.15	0.00	0.00
ERT-48	F	4.5 to 5.5	102-0359	33	5.35	44.6	48.4	1.69	0.00	0.00
ERT-48	G	5.5 to 6.5	102-0360	62	8.03	65.2	23.9	2.88	0.00	0.00
ERT-52	A	0 to 0.5	102-0370	50	-	-	-	-	-	-
ERT-52	B	0.5 to 1.5	102-0371	46	5.97	76.9	16.1	1.06	0.00	0.00
ERT-52	C	1.5 to 2.5	102-0372	74	7.41	71.5	19.3	1.86	0.00	0.00
ERT-52	D	2.5 to 3.5	102-0373	140	8.80	79.9	10.3	1.03	0.00	0.00
ERT-52	E	3.5 to 4.5	102-0374	120	7.99	74.4	16.0	1.70	0.00	0.00
ERT-52	F	4.5 to 5.5	102-0375	110	8.20	77.3	12.8	1.69	0.00	0.00
ERT-53	A	0 to 0.5	102-0384	54	-	-	-	-	-	-
ERT-53	B	0.5 to 1.5	102-0385	49	6.65	78.8	13.6	0.97	0.00	0.00
ERT-53	C	1.5 to 2.5	102-0386	52	8.16	74.6	15.6	1.63	0.00	0.00
ERT-53	D	2.5 to 3.5	102-0387	79	7.65	80.4	10.9	1.04	0.00	0.00
ERT-53	E	3.5 to 4.5	102-0388	100	7.06	85.1	7.28	0.56	0.00	0.00
ERT-53	F	4.5 to 5.5	102-0389	91	6.64	85.4	7.68	0.26	0.00	0.00
ERT-53	G	5.5 to 6.5	102-0390	75	6.06	81.2	12.1	0.70	0.00	0.00
% = Percent										
mg/g = milligrams per gram										

Table 4										
2015 Sediment Sampling Results for Grain Size and Total Organic Carbon										
Black River Site, WA 0-102										
Carthage, New York										
Location	Sublocation	Sample Depth (feet)	Sample Number	Total Organic Carbon (mg/g)	Clay (%)	Silt (%)	Fine Sand (%)	Medium Sand (%)	Coarse Sand (%)	Gravel (%)
ERT-56	A	0 to 0.5	102-0318	67	-	-	-	-	-	-
ERT-56	B	0.5 to 1.5	102-0319	100	-	-	-	-	-	-
ERT-56	C	1.5 to 2.5	102-0320	82	-	-	-	-	-	-
ERT-56	D	2.5 to 3.5	102-0321	75	-	-	-	-	-	-
ERT-56	E	3.5 to 4.5	102-0322	79	-	-	-	-	-	-
ERT-56	F	4.5 to 5.5	102-0323	80	-	-	-	-	-	-
ERT-56	G	5.5 to 6.5	102-0324	70	-	-	-	-	-	-
ERT-57	A	0 to 0.5	102-0326	18	-	-	-	-	-	-
ERT-57	B	0.5 to 1.5	102-0327	82	6.63	76.1	15.1	2.16	0.00	0.00
ERT-57	C	1.5 to 2.5	102-0328	52	9.13	59.5	29.9	1.42	0.00	0.00
ERT-57	D	2.5 to 3.5	102-0329	110	12.2	74.6	10.8	2.29	0.00	0.00
ERT-57	E	3.5 to 4.5	102-0330	59	10.8	54.2	33.2	1.84	0.00	0.00
ERT-57	F	4.5 to 5.5	102-0331	94	12.7	71.0	14.3	1.97	0.00	0.00
ERT-57	G	5.5 to 6.5	102-0332	100	14.5	76.7	6.97	1.82	0.00	0.00
ERT-59	A	0 to 0.5	102-0301	60	-	-	-	-	-	-
ERT-59	B	0.5 to 1.5	102-0302	57	-	-	-	-	-	-
ERT-59	C	1.5 to 2.5	102-0303	60	6.06	90.0	2.94	0.98	0.00	0.00
ERT-59	D	2.5 to 3.5	102-0304	97	10.5	87.2	1.91	0.38	0.00	0.00
ERT-59	E	3.5 to 4.5	102-0305	90	8.56	90.0	1.11	0.37	0.00	0.00
ERT-59	F	4.5 to 5.5	102-0306	85	11.3	86.4	1.95	0.32	0.00	0.00
ERT-59	G	5.5 to 6.5	102-0307	75	12.0	56.9	21.9	4.61	3.74	0.86
ERT-60	A	0 to 0.5	102-0309	57	-	-	-	-	-	-
% = Percent										
mg/g = milligrams per gram										

Table 5

Soil Sampling Results for PCBs ($\mu\text{g}/\text{kg}$)

Black River Site, WA 0-102

Carthage, New York

Location	Date Collected	Sample Number	Depth Range (feet)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268
ERT SS-01	6/5/2014	102-0251	0 to 0.5	2.3 U								
		102-0252	0.5 to 1.0	1.9 U	1.9 U	1.9 U	1.9 U	2 U	2 U	2 U	1.9 U	1.9 U
ERT SS-02	6/5/2014	102-0253	0 to 0.5	2.2 U								
		102-0254	0.5 to 1.0	2.1 U								
ERT SS-03	6/5/2014	102-0255	1.0 to 1.5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
		102-0256	0 to 0.5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
ERT SS-04	6/5/2014	102-0257	0 to 0.5	2.1 U								
ERT SS-05	6/5/2014	102-0258	0 to 0.5	2.1 U								
ERT SS-06	6/5/2014	102-0259	0 to 0.5	2.1 U								
ERT SS-07	6/5/2014	102-0261	0 to 0.5	1.9 UJ								
		102-0262	0.5 to 1.0	2 UJ								
ERT SS-08	6/5/2014	102-0263	1.0 to 1.5	1.9 UJ								
		102-0265	0 to 0.5	1.8 UJ								
ERT SS-09	6/5/2014	102-0266	0.5 to 1.0	2 UJ								
		102-0267	0 to 0.5	1.9 UJ								
ERT SS-10	6/5/2014	102-0268	0 to 0.5	1.8 UJ								
$\mu\text{g}/\text{kg}$ = micrograms per kilogram												
U = Not Detected												
J = Estimated Value												
UJ = Not Detected; Reporting Limit is Estimated												

Table 6						
Soil Sampling Results for Metals (mg/kg)						
Black River Site, WA 0-102						
Carthage, New York						
Location	Date Collected	Analyte	0 to 0.5	0.5 to 1.0	1.0 to 1.5	
ERT-SS-01	6/5/2014	Aluminum	11,100	6,070		NS
		Antimony	0.59 J	0.43 J		NS
		Arsenic	4.0	2.1		NS
		Barium	60.4	31.3		NS
		Beryllium	0.97	0.53		NS
		Cadmium	0.79	0.36 J		NS
		Calcium	9,670	5,050		NS
		Chromium	13.2	7.2		NS
		Cobalt	10.5	5		NS
		Copper	16.5	8.6		NS
		Iron	24,100	14,200		NS
		Lead	20	7.4		NS
		Magnesium	3,540	1,930		NS
		Manganese	437	233		NS
		Nickel	18.2	9.1		NS
		Potassium	454 J	300 J		NS
		Selenium	3.2 U	2.8 U		NS
		Silver	0.92 U	0.79 U		NS
		Sodium	238 J	116 J		NS
		Thallium	2.3 U	2 U		NS
		Vanadium	20.8	15.5		NS
		Zinc	76.6	42.3		NS
ERT-SS-02	6/5/2014	Aluminum	15,400	22,000		15,700
		Antimony	3.4 J	0.95 J		0.67 J
		Arsenic	6.2	3.4		2.9
		Barium	114	59.8		54.7
		Beryllium	0.67	0.86		0.92
		Cadmium	2.6	0.5		0.41 J
		Calcium	2,260	1,040		665
		Chromium	18.4	19.6		15.4
		Cobalt	20.5	8.9		10.4
		Copper	46.9	8.1		7.6
		Iron	31,300	28,200		24,400
		Lead	337	23.6		11
		Magnesium	2,450	3,520		3,540
		Manganese	316	259		282
		Nickel	15.2	17.6		17.4
		Potassium	703	493 J		497
		Selenium	0.63 J	0.46 J		0.39 J
		Silver	0.95 U	0.99 U		0.84 U
		Sodium	237 J	205 J		139 J
		Thallium	2.4 U	2.5 U		2.1 U
		Vanadium	27.2	32		24.3
		Zinc	8,340	649		246

mg/kg = milligrams per kilogram

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Table 6						
Soil Sampling Results for Metals (mg/kg)						
Black River Site, WA 0-102						
Carthage, New York						
Location	Date Collected	Analyte	0 to 0.5	0.5 to 1.0	1.0 to 1.5	
ERT-SS-03	6/5/2014	Depth Interval (Feet)				
		Aluminum	11,400	NS	NS	
		Antimony	0.55 J	NS	NS	
		Arsenic	3	NS	NS	
		Barium	44.2	NS	NS	
		Beryllium	0.62	NS	NS	
		Cadmium	0.29 J	NS	NS	
		Calcium	1,150	NS	NS	
		Chromium	9.3	NS	NS	
		Cobalt	5.4	NS	NS	
		Copper	5.4	NS	NS	
		Iron	18,800	NS	NS	
		Lead	9.3	NS	NS	
		Magnesium	2,030	NS	NS	
		Manganese	180	NS	NS	
		Nickel	9.5	NS	NS	
		Potassium	111 J	NS	NS	
		Selenium	0.59 J	NS	NS	
		Silver	0.83 U	NS	NS	
		Sodium	106 J	NS	NS	
ERT-SS-04	6/5/2014	Thallium	2.1 U	NS	NS	
		Vanadium	17.6	NS	NS	
		Zinc	55	NS	NS	
		Aluminum	14,500	NS	NS	
		Antimony	0.59 J	NS	NS	
		Arsenic	3.2	NS	NS	
		Barium	55.5	NS	NS	
		Beryllium	0.97	NS	NS	
		Cadmium	0.45 J	NS	NS	
		Calcium	1,490	NS	NS	
		Chromium	13.3	NS	NS	
		Cobalt	9.1	NS	NS	
		Copper	9.2	NS	NS	
		Iron	23,700	NS	NS	
		Lead	11.3	NS	NS	
		Magnesium	2,940	NS	NS	
		Manganese	347	NS	NS	
		Nickel	14.3	NS	NS	
		Potassium	127 J	NS	NS	
		Selenium	0.8 J	NS	NS	
		Silver	0.95 U	NS	NS	
		Sodium	115 J	NS	NS	
		Thallium	2.4 U	NS	NS	
		Vanadium	21.7	NS	NS	
		Zinc	71.6	NS	NS	

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Table 6						
Soil Sampling Results for Metals (mg/kg)						
Black River Site, WA 0-102						
Carthage, New York						
Location	Date Collected	Analyte	0 to 0.5	0.5 to 1.0	1.0 to 1.5	
ERT-SS-05	6/5/2014	Depth Interval (Feet)				
		Aluminum	13,200	NS	NS	
		Antimony	0.49 J	NS	NS	
		Arsenic	3.3	NS	NS	
		Barium	47.2	NS	NS	
		Beryllium	0.9	NS	NS	
		Cadmium	0.36 J	NS	NS	
		Calcium	1,030	NS	NS	
		Chromium	12.8	NS	NS	
		Cobalt	8.2	NS	NS	
		Copper	7	NS	NS	
		Iron	21,700	NS	NS	
		Lead	9.2	NS	NS	
		Magnesium	2,890	NS	NS	
		Manganese	294	NS	NS	
		Nickel	13.5	NS	NS	
		Potassium	155 J	NS	NS	
		Selenium	0.57 J	NS	NS	
		Silver	0.87 U	NS	NS	
		Sodium	112 J	NS	NS	
ERT-SS-06	6/5/2014	Thallium	2.2 U	NS	NS	
		Vanadium	20.5	NS	NS	
		Zinc	58.5	NS	NS	
		Aluminum	7,520	NS	NS	
		Antimony	0.38 J	NS	NS	
		Arsenic	1.7	NS	NS	
		Barium	35.8	NS	NS	
		Beryllium	0.4 J	NS	NS	
		Cadmium	0.22 J	NS	NS	
		Calcium	1,920	NS	NS	
		Chromium	7.2	NS	NS	
		Cobalt	3.4 J	NS	NS	
		Copper	2.9	NS	NS	
		Iron	13,200	NS	NS	
		Lead	6.8	NS	NS	
		Magnesium	1,920	NS	NS	
		Manganese	145	NS	NS	
		Nickel	7.1	NS	NS	
		Potassium	232 J	NS	NS	
		Selenium	0.35 J	NS	NS	
		Silver	0.95 U	NS	NS	
		Sodium	115 J	NS	NS	
		Thallium	2.4 U	NS	NS	
		Vanadium	12.2	NS	NS	
		Zinc	46.8	NS	NS	

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Table 6						
Soil Sampling Results for Metals (mg/kg)						
Black River Site, WA 0-102						
Carthage, New York						
Location	Date Collected	Analyte	0 to 0.5	0.5 to 1.0	1.0 to 1.5	
ERT-SS-07	6/5/2014	Aluminum	4,790	3,610	2,970	
		Antimony	0.36 J	0.15 J	0.53	
		Arsenic	1.7	1.9 J	1.7	
		Barium	27.9	230 J	103	
		Beryllium	0.5	0.4 U	0.54	
		Cadmium	0.25 J	0.69	0.6	
		Calcium	4,890	1,790 J	915	
		Chromium	5.6	1.4	2.5	
		Cobalt	4.3	3.3 J	9	
		Copper	7.4	7.5	7.7	
		Iron	12,800	10,200 J	23,200	
		Lead	9.9	4.9 J	2.7	
		Magnesium	1,650	1,250 J	981	
		Manganese	537	17,400	2,080	
		Nickel	7.9	22.8	10.3	
		Potassium	192 J	75.2 J	437 U	
		Selenium	2.9 U	2.8 UJ	3.1 U	
		Silver	0.84 U	0.49 J	0.87 U	
		Sodium	135 J	142 J	100 J	
		Thallium	2.1 U	3.5	2.2 U	
		Vanadium	10.6	8.2	6.4	
		Zinc	98.1	29.7	33.6	
ERT-SS-08	6/5/2014	Aluminum	797	4,250	NS	
		Antimony	5.1 U	0.43	NS	
		Arsenic	1.4	1.8	NS	
		Barium	17	26	NS	
		Beryllium	0.25 J	0.52	NS	
		Cadmium	0.19 J	0.39 J	NS	
		Calcium	230,000	59,500	NS	
		Chromium	3.1	6	NS	
		Cobalt	1.9 J	4 J	NS	
		Copper	3.3	5.6	NS	
		Iron	7,210	14,600	NS	
		Lead	5	6.6	NS	
		Magnesium	3,570	2,510	NS	
		Manganese	163	163	NS	
		Nickel	4.4	7.4	NS	
		Potassium	125 J	227 J	NS	
		Selenium	3 U	3.1 U	NS	
		Silver	0.85 U	0.88 U	NS	
		Sodium	74.3 J	114 J	NS	
		Thallium	2.1 U	2.2 U	NS	
		Vanadium	5.9	13.3	NS	
		Zinc	18.6	33.3	NS	

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NS = Not Sampled

Table 6						
Soil Sampling Results for Metals (mg/kg)						
Black River Site, WA 0-102						
Carthage, New York						
Location	Date Collected	Analyte	0 to 0.5	0.5 to 1.0	1.0 to 1.5	
ERT-SS-09	6/5/2014	Aluminum	3,040	NS	NS	
		Antimony	0.38	NS	NS	
		Arsenic	1.6	NS	NS	
		Barium	21.6	NS	NS	
		Beryllium	0.4	NS	NS	
		Cadmium	0.33 J	NS	NS	
		Calcium	153,000	NS	NS	
		Chromium	4.6	NS	NS	
		Cobalt	3.1 J	NS	NS	
		Copper	6.1	NS	NS	
		Iron	9,840	NS	NS	
		Lead	5.8	NS	NS	
		Magnesium	3,850	NS	NS	
		Manganese	190	NS	NS	
		Nickel	6.6	NS	NS	
		Potassium	207 J	NS	NS	
		Selenium	2.7 U	NS	NS	
		Silver	0.76 U	NS	NS	
		Sodium	84.6 J	NS	NS	
		Thallium	1.9 U	NS	NS	
		Vanadium	8.5	NS	NS	
		Zinc	31.4	NS	NS	
ERT-SS-10	6/5/2014	Aluminum	2,970	NS	NS	
		Antimony	0.3	NS	NS	
		Arsenic	1.7	NS	NS	
		Barium	19.5	NS	NS	
		Beryllium	0.44	NS	NS	
		Cadmium	0.28 J	NS	NS	
		Calcium	11,400	NS	NS	
		Chromium	3.5	NS	NS	
		Cobalt	3.3 J	NS	NS	
		Copper	6.2	NS	NS	
		Iron	11,600	NS	NS	
		Lead	4.8	NS	NS	
		Magnesium	1,450	NS	NS	
		Manganese	220	NS	NS	
		Nickel	5.7	NS	NS	
		Potassium	61.1 J	NS	NS	
		Selenium	0.13	NS	NS	
		Silver	0.76 U	NS	NS	
		Sodium	95.1 J	NS	NS	
		Thallium	1.9 U	NS	NS	
		Vanadium	9.1	NS	NS	
		Zinc	24.7	NS	NS	

mg/kg = milligrams per kilogram

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NS = Not Sampled

Table 7

Fish Summary Data 2015

Black River Site, WA 0-102

Carthage, New York

Sample Number	CLP Sample Number	Location	Sublocation	Date Collected	Common Name	Fork Length (inches)	Total Length (inches)	Weight (grams)	Sex	Percent Lipids	Percent Moisture	Comments
102-0565F	BBFP9	ECO1	CRAY-01	5/14/2015	Crayfish				NA	1.42	74.1	Composite
102-0531F	BBJH5	ECO1	WALL-01L	5/11/2015	Walleye	15	15.5	575	NA	0.30	80.2	
102-0532F	BBJH6	ECO1	WALL-01R	5/11/2015	Walleye	15	15.5	575	NA	0.43	79.3	
102-0548F	BBJK2	ECO3	BULL-02	5/13/2015	Bullhead	NA	15	795	NA	0.16	80.7	
102-0501F	BBJE3	ECO3	PUMP-01	5/12/2015	Pumpkinseed	NA	7.75	222	NA	7.27	78.9	
102-0502F	BBJE6	ECO3	PUMP-02	5/12/2015	Pumpkinseed	NA	7.5	226	NA	1.55	79.3	
102-0566F	BBFQ0	ECO3	PUMP-03	5/14/2015	Pumpkinseed	NA	7.75	236	NA	0.80	80.0	
102-0567F	BBFQ1	ECO3	PUMP-04	5/14/2015	Pumpkinseed	NA	7	148	NA	1.05	79.4	
102-0568F	BBFQ2	ECO3	PUMP-05	5/14/2015	Pumpkinseed	NA	4.25	28	NA	0.65	78.9	
102-0551F	BBJK5	ECO3	WALL-02L	5/13/2015	Walleye	17	17.75	728	NA	0.26	78.5	
102-0552F	BBJK6	ECO3	WALL-02R	5/13/2015	Walleye	17	17.75	728	NA	0.17	78.6	MS/MSD
102-0553F	BBJK7	ECO3	WALL-03L	5/13/2015	Walleye	16.5	17.5	779	Male	0.73	80.6	
102-0554F	BBJK8	ECO3	WALL-03R	5/13/2015	Walleye	16.5	17.5	779	Male	0.70	79.5	
102-0555F	BBJK9	ECO3	WALL-04L	5/13/2015	Walleye	13.25	14.25	440	Male	0.66	79.4	
102-0556F	BBJL0	ECO3	WALL-04R	5/13/2015	Walleye	13.25	14.25	440	Male	0.87	78.7	
102-0557F	BBFP1	ECO3	WALL-05L	5/13/2015	Walleye	14	15	494	Male	0.23	78.9	
102-0558F	BBFP2	ECO3	WALL-05R	5/13/2015	Walleye	14	15	494	Male	0.96	78.4	
102-0546F	BBJK0	ECO4	BULL-02	5/13/2015	Bullhead	NA	11.5	325	NA	2.18	81.2	
102-0547F	BBJK1	ECO4	BULL-03	5/13/2015	Bullhead	NA	13.5	707	Female	0.43	80.3	MS/MSD
102-0549F	BBJK3	ECO4	BULL-04	5/13/2015	Bullhead	NA	12.25	516	Female	0.53	79.2	
102-0550F	BBJK4	ECO4	BULL-05	5/13/2015	Bullhead	NA	11.5	341	NA	1.52	79.2	
102-0529F	BBJH3	ECO4	CARP-001L	5/12/2015	Carp	13.5	14.5	1114	NA	2.36	79.6	MS/MSD
102-0530F	BBJH4	ECO4	CARP-001R	5/12/2015	Carp	13.5	14.5	1114	NA	1.32	77.4	
102-0503F	BBJE7	ECO4	PUMP-01	5/12/2015	Pumpkinseed	NA	8.25	225	NA	4.27	79.9	
102-0504F	BBJE8	ECO4	PUMP-02	5/12/2015	Pumpkinseed	NA	9	227	NA	3.80	81.6	
102-0505F	BBJE9	ECO4	PUMP-03	5/12/2015	Pumpkinseed	NA	7.5	190	NA	2.57	76.9	
102-0506F	BBJF0	ECO4	PUMP-04	5/12/2015	Pumpkinseed	NA	7.75	233	NA	5.15	78.6	
MS/MSD = Matrix Spike/Matrix Spike Duplicate Sample												

Table 7

Fish Summary Data 2015

Black River Site, WA 0-102

Carthage, New York

Sample Number	CLP Sample Number	Location	Sublocation	Date Collected	Common Name	Fork Length (inches)	Total Length (inches)	Weight (grams)	Sex	Percent Lipids	Percent Moisture	Comments
102-0507F	BBJF1	ECO4	PUMP-05	5/12/2015	Pumpkinseed	NA	8.75	280	NA	3.20	75.4	
102-0582F	BBFR6	ECO4	SMB-01L	5/13/2015	Smallmouth Bass	14.5	15.75	628	NA	1.18	79.4	
102-0583F	BBFR7	ECO4	SMB-01R	5/14/2015	Smallmouth Bass	14.5	15.75	628	NA	0.13	80.1	
102-0584F	BBFR8	ECO4	SMB-02L	5/14/2015	Smallmouth Bass	13.25	14	502	NA	0.16	80.6	
102-0585F	BBFR9	ECO4	SMB-02R	5/14/2015	Smallmouth Bass	13.25	14	502	NA	0.13	80.4	
102-0559F	BBFP3	ECO4	WALL-01L	5/13/2015	Walleye	14.5	15.5	514	NA	0.20	79.5	
102-0560F	BBFP4	ECO4	WALL-01R	5/13/2015	Walleye	14.5	15.5	514	NA	0.20	78.2	
102-0561F	BBFP5	ECO4	WALL-02L	5/13/2015	Walleye	14.75	15.75	516	Male	0.17	80.1	
102-0562F	BBFP6	ECO4	WALL-02R	5/13/2015	Walleye	14.75	15.75	516	Male	0.73	80.1	
102-0563F	BBFP7	ECO4	WALL-03L	5/13/2015	Walleye	13.5	14.25	416	NA	0.20	80.6	
102-0564F	BBFP8	ECO4	WALL-03R	5/13/2015	Walleye	13.5	14.25	416	NA	0.37	79.2	
102-0541F	BBJJ5	ECO5	BULL-06	5/13/2015	Bullhead	NA	15.5	802	NA	0.43	80.1	
102-0542F	BBJJ6	ECO5	BULL-07	5/13/2015	Bullhead	NA	14.5	735	NA	0.83	82.4	
102-0543F	BBJJ7	ECO5	BULL-08	5/13/2015	Bullhead	NA	10	275	Female	1.13	76.6	
102-0544F	BBJJ8	ECO5	BULL-09	5/13/2015	Bullhead	NA	10	237	Female	0.93	80.8	
102-0545F	BBJJ9	ECO5	BULL-10	5/13/2015	Carp	NA	14.5	816	Female	0.47	78.7	
102-0508F	BBJF2	ECO5	PUMP-01	5/12/2015	Pumpkinseed	NA	8.5	293	NA	1.66	77.6	
102-0509F	BBJF3	ECO5	PUMP-02	5/12/2015	Pumpkinseed	NA	8.5	223	NA	2.09	79.0	
102-0510F	BBJF4	ECO5	PUMP-03	5/12/2015	Pumpkinseed	NA	8	220	NA	2.65	78.7	
102-0511F	BBJF5	ECO5	PUMP-04	5/12/2015	Pumpkinseed	NA	7	108	NA	18.00	82.1	
102-0512F	BBJF6	ECO5	PUMP-05	5/12/2015	Pumpkinseed	NA	5.75	73	NA	4.35	77.2	
102-0580F	BBFR4	ECO5	SMB-01L	5/12/2015	Smallmouth Bass	15	15.75	609	NA	0.16	82.3	
102-0581F	BBFR5	ECO5	SMB-01R	5/12/2015	Smallmouth Bass	15	15.75	609	NA	0.13	80.4	
102-0533F	BBJH7	ECO5	WALL-01L	5/12/2015	Walleye	15	15.75	542	Female	0.26	79.9	
102-0534F	BBJH8	ECO5	WALL-01R	5/12/2015	Walleye	15	15.75	542	Female	0.33	79.4	
102-0535F	BBJH9	ECO5	WALL-02L	5/12/2015	Walleye	17.25	18	886	Female	0.16	78.5	
102-0536F	BBJJ0	ECO5	WALL-02R	5/12/2015	Walleye	17.25	18	886	Female	0.76	77.2	MS/MSD
102-0537F	BBJJ1	ECO5	WALL-03L	5/12/2015	Walleye	15.5	16.5	604	Female	0.43	78.8	
102-0538F	BBJJ2	ECO5	WALL-03R	5/12/2015	Walleye	15.5	16.5	604	Female	6.88	78.6	
102-0539F	BBJJ3	ECO5	WALL-04L	5/12/2015	Walleye	14.5	15.5	499	Male	10.63	79.8	
MS/MSD = Matrix Spike/Matrix Spike Duplicate Sample												

Table 7

Fish Summary Data 2015

Black River Site, WA 0-102

Carthage, New York

Sample Number	CLP Sample Number	Location	Sublocation	Date Collected	Common Name	Fork Length (inches)	Total Length (inches)	Weight (grams)	Sex	Percent Lipids	Percent Moisture	Comments
102-0540F	BBJJ4	EC05	WALL-04R	5/12/2015	Walleye	14.5	15.5	499	Male	0.43	79.6	
102-0518F	BBJG2	ECOR	BULL-01	5/13/2015	Bullhead	NA	8.25	134	NA	14.21	80.6	
102-0569F	BBFQ3	ECOR	BULL-02	5/14/2015	Bullhead	NA	8.25	121	NA	1.18	81.6	
102-0570F	BBFQ4	ECOR	CARP-01	5/14/2015	Carp	11.75	12.75	747	NA	1.07	81.3	
102-0571F	BBFQ5	ECOR	CARP-02	5/14/2015	Carp	14.75	16	1171	NA	0.50	79.6	
102-0572F	BBFQ6	ECOR	CARP-03	5/14/2015	Carp	25.5	28.5	12500	NA	1.83	74.8	
102-0573F	BBFQ7	ECOR	CARP-04	5/14/2015	Carp	23.5	26	10500	Female	1.11	78.0	
102-0574F	BBFQ8	ECOR	CARP-05	5/14/2015	Carp	10.5	11.75	437	NA	1.82	79.9	
102-0513F	BBJF7	ECOR	PUMP-01	5/12/2015	Pumpkinseed	NA	5.5	62	NA	2.56	77.9	
102-0514F	BBJF8	ECOR	PUMP-02	5/12/2015	Pumpkinseed	NA	5.5	61	NA	1.39	76.6	
102-0515F	BBJF9	ECOR	PUMP-03	5/12/2015	Pumpkinseed	NA	4.5	30	NA	5.55	77.1	
102-0516F	BBJG0	ECOR	PUMP-04	5/12/2015	Pumpkinseed	NA	4.25	31	NA	1.47	78.0	
102-0517F	BBJG1	ECOR	PUMP-05	5/12/2015	Pumpkinseed	NA	NA	30	NA	0.29	78.0	Composite of Three Fish (TL = 3, 3.5, 3)
102-0525F	BBJG9	ECOR	SMB-01L	5/13/2015	Smallmouth Bass	12.75	13.25	510	NA	0.20	79.6	
102-0526F	BBJH0	ECOR	SMB-01R	5/13/2015	Smallmouth Bass	12.75	13.25	510	NA	0.23	78.7	
102-0527F	BBJH1	ECOR	SMB-02L	5/13/2015	Smallmouth Bass	13.5	14.25	523	NA	0.17	79.4	
102-0528F	BBJH2	ECOR	SMB-02R	5/13/2015	Smallmouth Bass	13.5	14.25	523	NA	0.86	79.2	
102-0519F	BBJG3	ECOR	WALL-01L	5/13/2015	Walleye	14.25	16.25	928	Male	0.73	77.8	
102-0520F	BBJG4	ECOR	WALL-01R	5/13/2015	Walleye	14.25	16.25	928	Male	0.35	78.7	
102-0521F	BBJG5	ECOR	WALL-02L	5/13/2015	Walleye	17.75	19	993	NA	0.26	78.8	
102-0522F	BBJG6	ECOR	WALL-02R	5/13/2015	Walleye	17.75	19	993	NA	0.87	76.7	
102-0523F	BBJG7	ECOR	WALL-03L	5/13/2015	Walleye	14	15	575	NA	1.50	77.2	
102-0524F	BBJG8	ECOR	WALL-03R	5/13/2015	Walleye	14	15	575	NA	0.69	76.8	
102-0575F	BBFQ9	NYS1	CARP-01	5/14/2015	Carp	28.75	30.5	10000	NA	0.79	77.9	
102-0576F	BBFR0	NYS2	CARP-02	5/14/2015	Carp	35.5	33.5	14000	Female	1.20	79.0	
102-0577F	BBFR1	NYS3	CARP-03	5/14/2015	Carp	29.65	31.5	11000	Female	2.99	67.5	MS/MSD
102-0578F	BBFR2	NYS3	CARP-04	5/14/2015	Carp	21.2	22.65	450	NA	6.50	72.2	
102-0579F	BBFR3	NYS4	CARP-05	5/14/2015	Carp	29	30.5	8500	NA	0.76	83.8	

MS/MSD = Matrix Spike/Matrix Spike Duplicate Sample

TL = Total Length

APPENDIX A
Vibracore Borehole Logs
Black River Trip Report
February 2015

Project No: WA-102

Project: Black River Site

Client: EPA/ERT

Location: Carthage, NY

Log of Borehole: ERT-47

Latitude: 44.00075381

Longitude: -75.63691868

Logged By: J. Bolduc

SUBSURFACE PROFILE			SAMPLE			Percent Clay % 20 40 60 80	Comments
Depth	Symbol	Description	Elev.	Number	Type	Recovery	
0	ft m	Grade Surface	0.00	BBJ81/MBBJ81			
0		Soft Sediment Very dark gray, silt, some fine-grained sand, trace medium grained sand, trace clay, very soft, wet.		BBJ82/MBBJ82			
1				BBJ83/MBBJ83			
2				BBJ84/MBBJ84			
3		Silt With Sand Very dark gray, and fine-grained sand, trace medium-grained sand, trace clay, scattered plant fragments and rootlets, soft, wet.	-3.00	BBJ85/MBBJ85			
4				BBJ86/MBBJ86			
5				BBJ87/MBBJ87			
6							
7		End of Borehole	-7.00				
8							
9							
10							

Drill Method: Vibracore

Drill Company: ATL

Start Date: 5/11/15

End Date: 5/11/15

Hole Size: 3.5 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Sheet: 1 of 1

Project No: WA-102

Project: Black River Site

Client: EPA/ERT

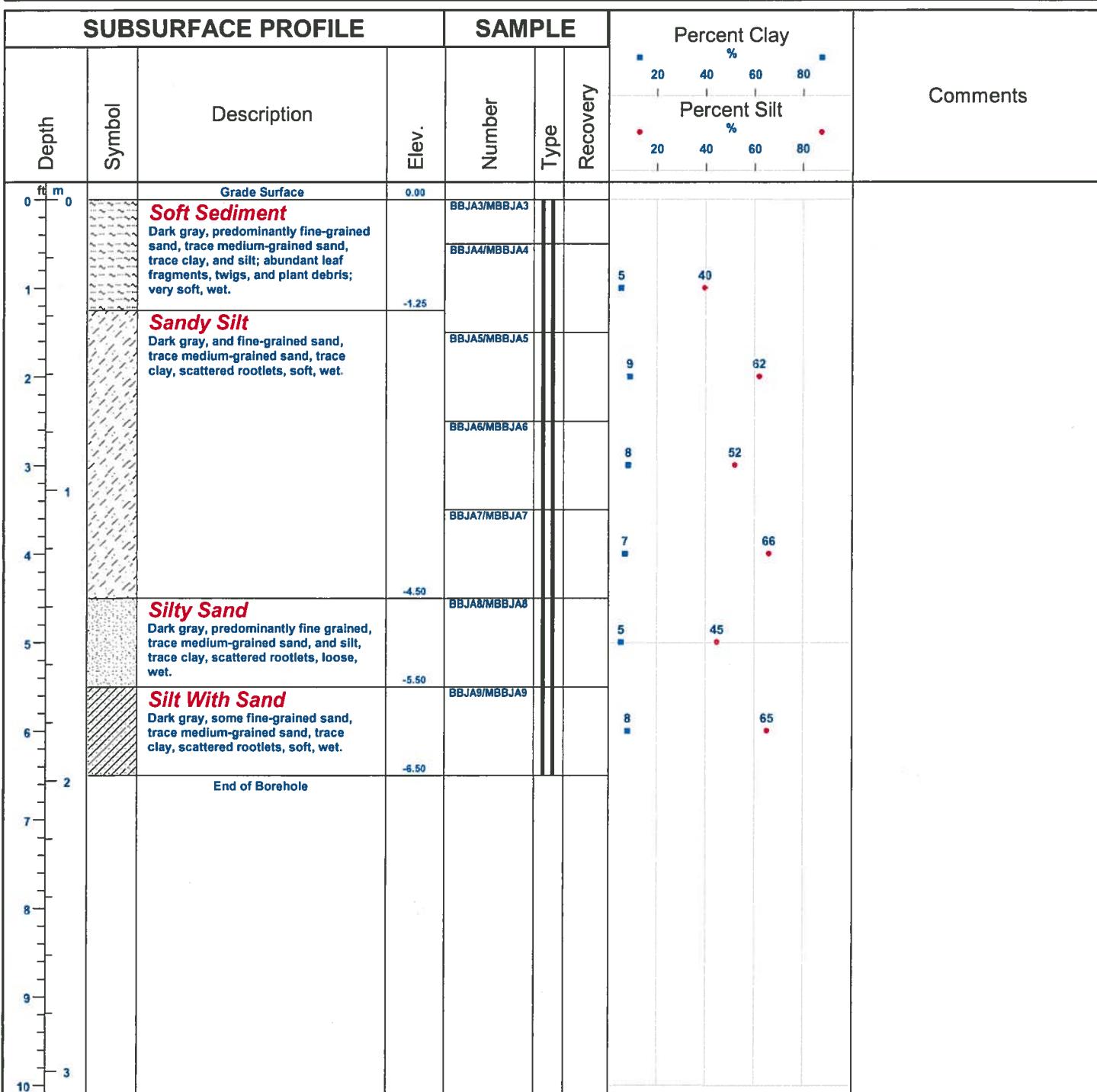
Location: Carthage, NY

Log of Borehole: ERT-48

Latitude: 44.00043333

Longitude: -75.6388475

Logged By: J. Bolduc



Drill Method: Vibracore

Drill Company: ATL

Start Date: 5/12/15

End Date: 5/12/15

Hole Size: 3.5 inches

Lockheed Martin/SERAS
2890 Woodbridge Avenue
Building 209 Annex
Edison, NJ 08837

Sheet: 1 of 1

Project No: WA-102

Project: Black River Site

Client: EPA/ERT

Location: Carthage, NY

Log of Borehole: ERT-49

Latitude: 44.00202301

Longitude: -75.63914379

Logged By: J. Bolduc

SUBSURFACE PROFILE			SAMPLE			Percent Clay % 20 40 60 80	Comments
Depth ft m	Symbol	Description	Elev.	Number	Type	Recovery	
0		Grade Surface	0.00	BBJ96/MBBJ96			
		Soft Sediment Dark gray, silt, some fine-grained sand, trace medium grained sand, trace clay, abundant leaves, fibrous plant remains, bark fragments, very soft, wet.	-0.50	BBJ97/MBBJ97			
1				BBJ98/MBBJ98			
2				BBJ99/MBBJ99			
3		Bleb-type sheen at 3.5 feet.		BBJA0/MBBJA0			
4				BBJA1/MBBJA1			
5				BBJA2/MBBJA2			
6		Becomes dark greenish gray at 6.5 feet.					
7		End of Borehole	-7.00				
8							
9							
10							

Drill Method: Vibracore

Drill Company: ATL

Start Date: 5/12/15

End Date: 5/12/15

Hole Size: 3.5 inches

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Sheet: 1 of 1

Project No: WA-102

Project: Black River Site

Client: EPA/ERT

Location: Carthage, NY

Log of Borehole: ERT-50

Latitude: 44.00601153

Longitude: -75.64013906

Logged By: J. Bolduc

SUBSURFACE PROFILE			SAMPLE			Percent Clay % 20 40 60 80	Comments
Depth ft m	Symbol	Description	Elev.	Number	Type	Recovery	
0 ft 0 m		Grade Surface Soft Sediment Dark gray, silt, some fine-grained sand, trace medium- grained sand, trace clay, scattered wood fragments, fibrous peat lens at 3.5 feet, very soft, wet.	0.00	BBJB0/MBBJB0			No samples collected for grain size analysis.
1				BBJB1/MBBJB1			
2				BBJB3/MBBJB3			
3				BBJB5/MBBJB5			
4		End of Borehole	-3.90				
5							
6							
7							
8							
9							
10							

Drill Method: Vibracore

Drill Company: ATL

Start Date: 5/12/15

End Date: 5/12/15

Hole Size: 3.5 inches

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2890 Woodbridge Avenue
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Sheet: 1 of 1

Project No: WA-102

Project: Black River Site

Client: EPA/ERT

Location: Carthage, NY

Log of Borehole: ERT-51

Latitude: 44.00601153

Longitude: -75.64013906

Logged By: J. Bolduc

SUBSURFACE PROFILE			SAMPLE			Percent Clay % 20 40 60 80	Comments
Depth	Symbol	Description	Elev.	Number	Type	Recovery	
0 ft m 0		Grade Surface	0.00	BBJB7/MBBJB7			
		Soft Sediment Very dark gray, fine- to coarse-grained sand, trace silt, predominantly small wood and shell fragments, very loose, wet.	-1.00	BBJB8/MBBJB8			
1		Sand With Silt Brown, fine to medium, trace coarse, little silt, trace clay, trace fine subangular gravel, scattered wood and shell fragments, dense, wet.		BBJB9/MBBJB9			
2				BBJC0/MBBJC0			
3		End of Borehole	-3.10				No samples collected for grain size analysis.
4							
5							
6							
7							
8							
9							
10							

Drill Method: Vibracore

Drill Company: ATL

Start Date: 5/12/15

End Date: 5/12/15

Hole Size: 3.5 inches

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Sheet: 1 of 1

Project No: WA-102

Project: Black River Site

Client: EPA/ERT

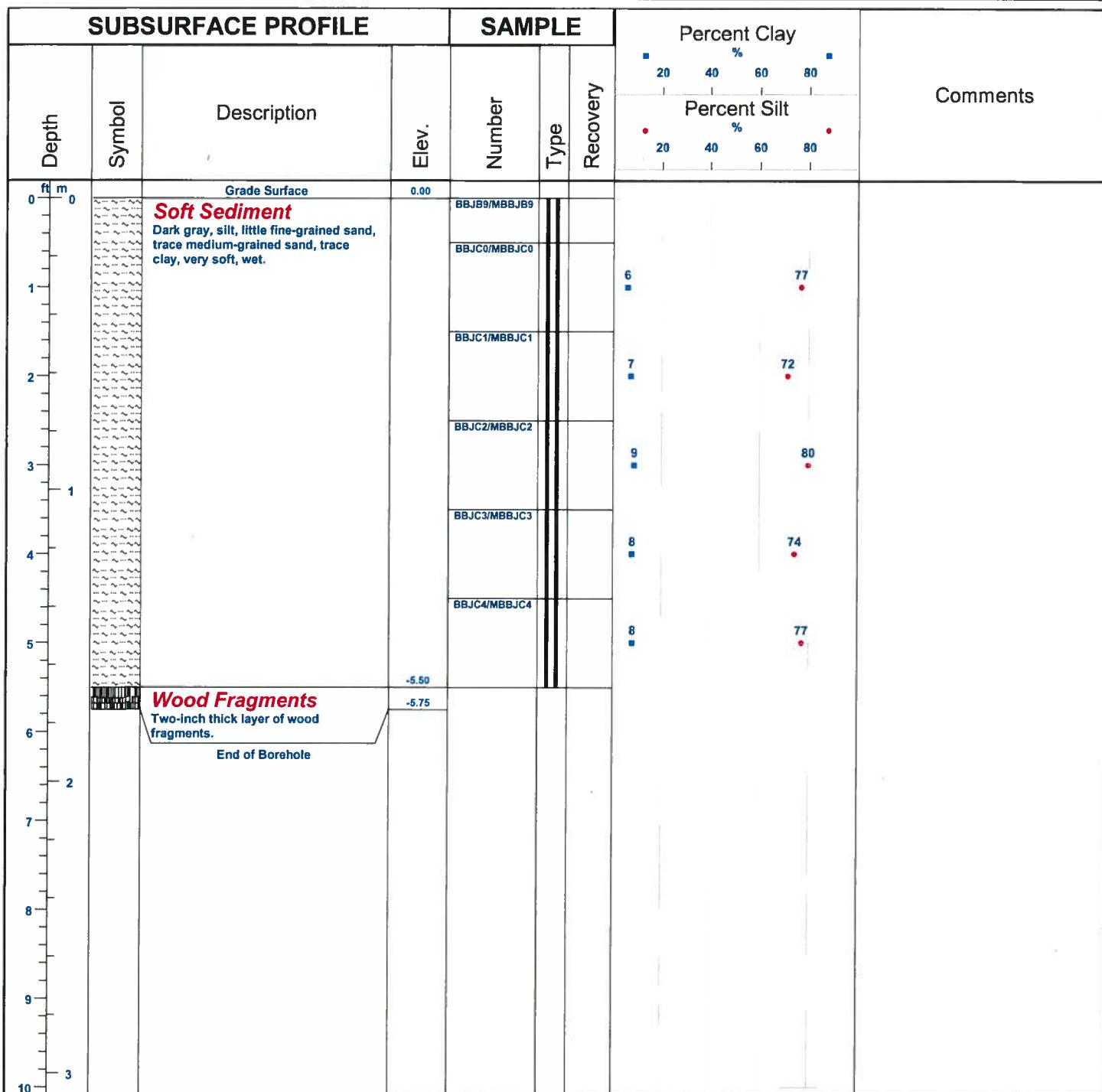
Location: Carthage, NY

Log of Borehole: ERT-52

Latitude: 44.00775898

Longitude: -75.63850277

Logged By: J. Bolduc



Drill Method: Vibracore

Drill Company: ATL

Start Date: 5/12/15

End Date: 5/12/15

Hole Size: 3.5 inches

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Sheet: 1 of 1

Project No: WA-102

Project: Black River Site

Client: EPA/ERT

Location: Carthage, NY

Log of Borehole: ERT-53

Latitude: 44.0145578

Longitude: -75.64237682

Logged By: J. Bolduc

SUBSURFACE PROFILE			SAMPLE			Percent Clay %	Percent Silt %	Comments
Depth	Symbol	Description	Elev.	Number	Type	Recovery		
0 ft m 0		Grade Surface	0.00	BBJD3/MBBJD3			7	
1		Soft Sediment Dark gray, silt, little fine-grained sand, trace medium-grained sand, trace clay, occasional rootlets, very soft, wet.		BBJD4/MBBJD4			8	79
2				BBJD5/MBBJD5			8	75
3		Trace fine-grained sand between 3.5 and 5.5 feet.		BBJD6/MBBJD6			8	80
4				BBJD7/MBBJD7			7	85
5				BBJD8/MBBJD8			7	85
6				BBJD9/MBBJD9			6	81
7		End of Borehole	-7.00					
8								
9								
10								

Drill Method: Vibracore

Drill Company: ATL

Start Date: 5/12/15

End Date: 5/12/15

Hole Size: 3.5 inches

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Sheet: 1 of 1

Project No: WA-102

Project: Black River Site

Client: EPA/ERT

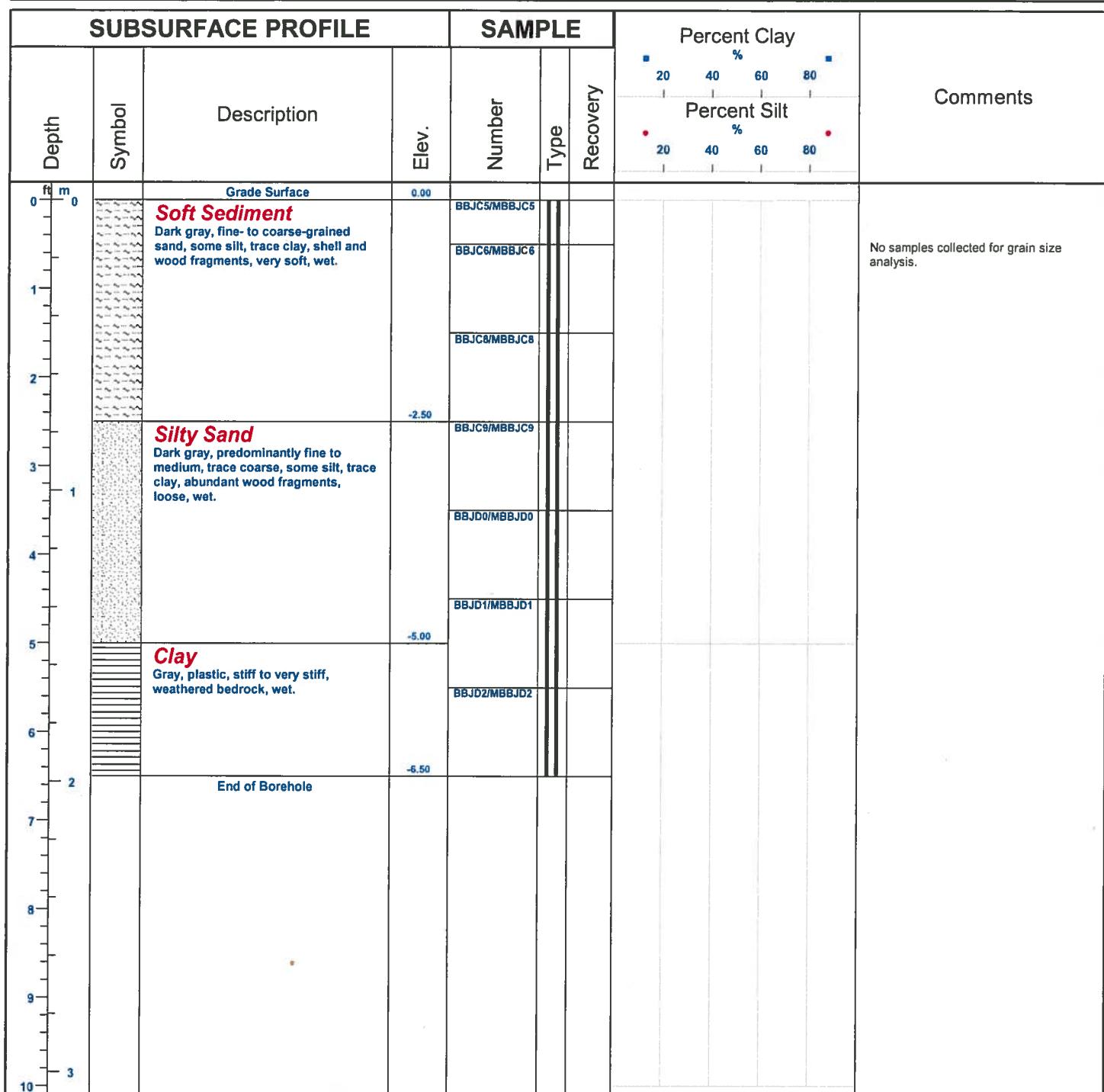
Location: Carthage, NY

Log of Borehole: ERT-54

Latitude: 44.01489696

Longitude: -75.64165285

Logged By: J. Bolduc



Drill Method: Vibracore

Start Date: 5/12/15

Hole Size: 3.5 inches

Drill Company: ATL

End Date: 5/12/15

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Sheet: 1 of 1

Project No: WA-102

Project: Black River Site

Client: EPA/ERT

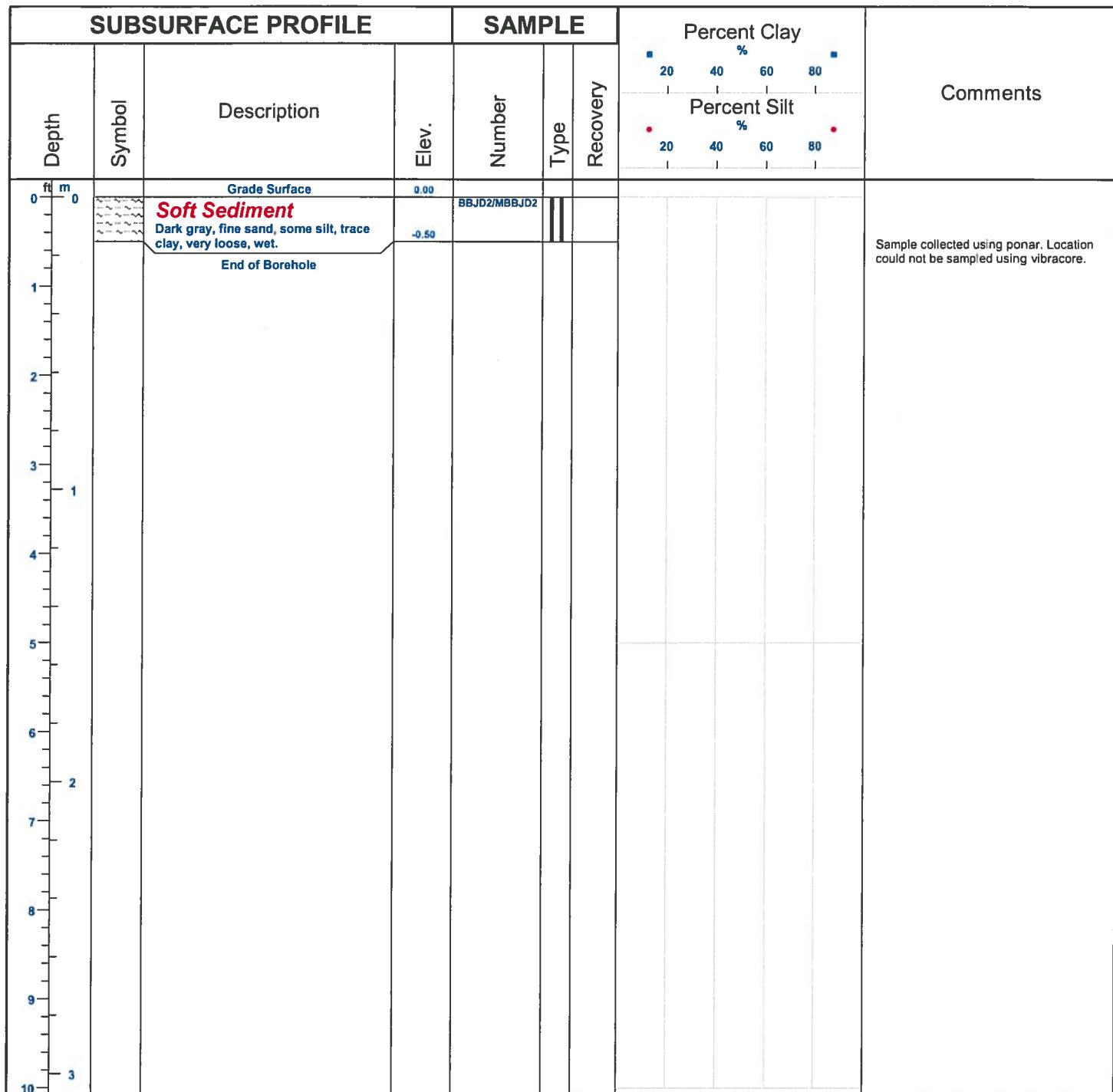
Location: Carthage, NY

Log of Borehole: ERT-55

Latitude: 44.01526029

Longitude: -75.64100246

Logged By: J. Bolduc



Drill Method: Ponar

Start Date: 5/12/15

Hole Size: Not Applicable

Drill Company: ATL

End Date: 5/12/15

Sheet: 1 of 1

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Project No: WA-102

Project: Black River Site

Client: EPA/ERT

Location: Carthage, NY

Log of Borehole: ERT-56

Latitude: 44.01847282

Longitude: -75.64515193

Logged By: J. Bolduc

SUBSURFACE PROFILE			SAMPLE			Comments	
Depth ft m	Symbol	Description	Elev.	Number	Type	Recovery	
0 0		Grade Surface	0.00	BBJ67/MBBJ67			
		Soft Sediment Dark gray, predominantly fibrous peat with silt and fine-grained sand, very soft, wet.	-1.00	BBJ68/MBBJ68			
1 1		Silt With Sand Dark gray, some fine-grained sand, trace clay, occasional fibrous peat, soft, wet.		BBJ69/MBBJ69			
2 2				BBJ70/MBBJ70			
3 1				BBJ71/MBBJ71			
4 2				BBJ72/MBBJ72			
5 1		Silty Sand Dark gray, fine, some silt, trace clay, occasional fibrous peat, dense, wet.	-5.00	BBJ73/MBBJ73			
6 2							
7 2		Peat Dark grayish brown to brown, trace silt, fibrous, wet.	-6.50				
8 3		End of Borehole	-7.00				
9 3							
10 3							

Drill Method: Vibracore

Drill Company: ATL

Start Date: 5/11/15

End Date: 5/11/15

Hole Size: 3.5 inches

Sheet: 1 of 1

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Project No: WA-102

Project: Black River Site

Client: EPA/ERT

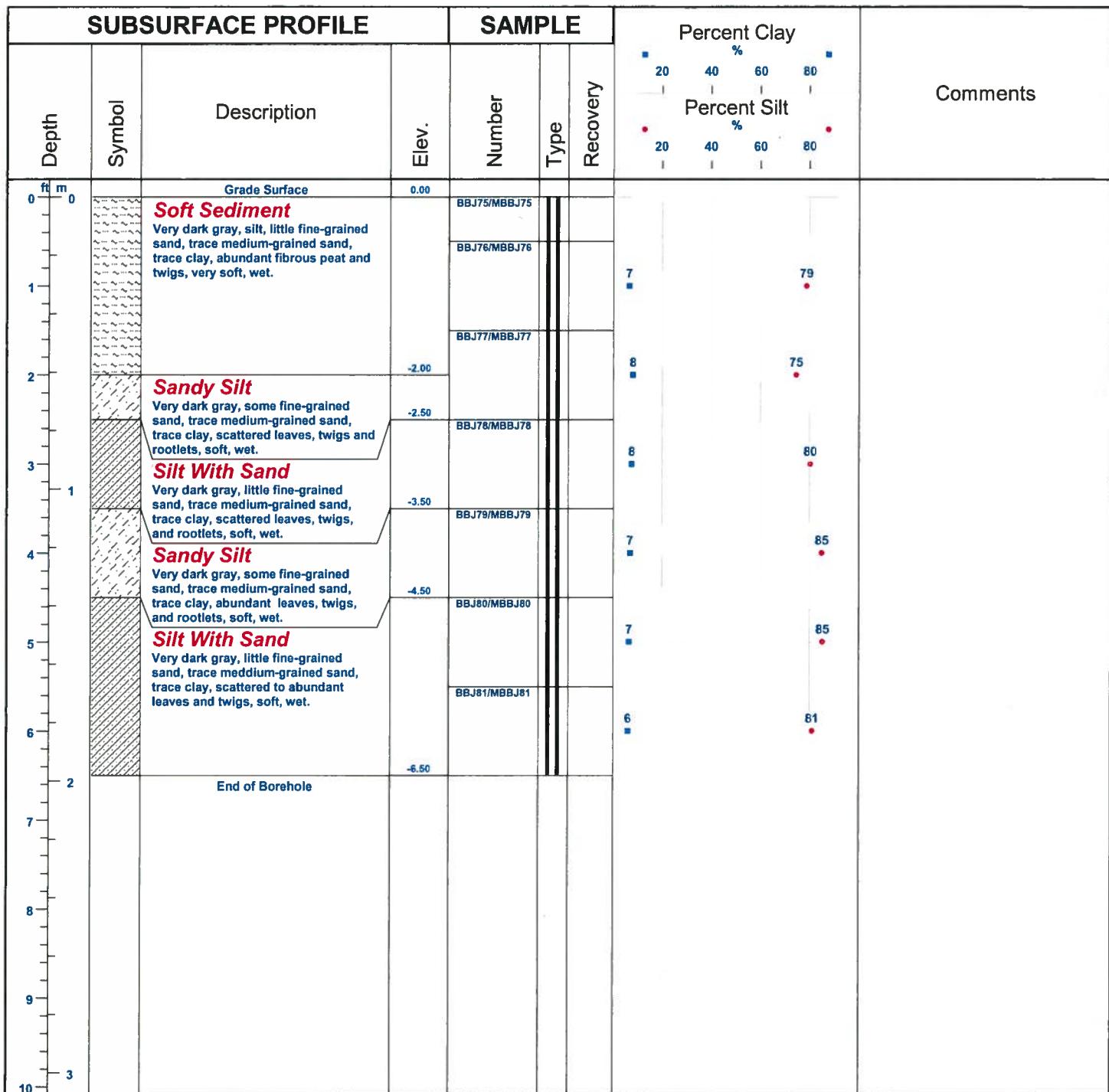
Location: Carthage, NY

Log of Borehole: ERT-57

Latitude: 44.01931316

Longitude: -75.64849123

Logged By: J. Bolduc



Drill Method: Vibracore

Drill Company: ATL

Start Date: 5/11/15

End Date: 5/11/15

Hole Size: 3.5 inches

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Sheet: 1 of 1

Project No: WA-102

Project: Black River Site

Client: EPA/ERT

Location: Carthage, NY

Log of Borehole: ERT-58

Latitude: 44.02001237

Longitude: -75.65019156

Logged By: J. Bolduc

SUBSURFACE PROFILE			SAMPLE			Percent Clay % 20 40 60 80	Percent Silt % 20 40 60 80	Comments
Depth ft m	Symbol	Description	Elev.	Number	Type	Recovery		
0 0		Grade Surface	0.00	BBJ60/MBBJ60				
1		Soft Sediment Very dark gray, silt, little fine-grained sand, trace medium-grained sand, trace clay, occasional rootlets, very soft, wet.	-1.50	BBJ61/MBBJ61				
2		Silt Very dark gray, trace fine-grained and medium-grained sand, trace clay, occasional twigs, plant fragments, and rootlets, soft, wet.	-4.50	BBJ62/MBBJ62				
3				BBJ63/MBBJ63				
4				BBJ64/MBBJ64				
5		Silt With Sand Very dark gray, some fine-grained sand, trace medium-grained sand, trace clay, soft, wet.	-7.00	BBJ65/MBBJ65				
6				BBJ66/MBBJ66				
7		End of Borehole						
8								
9								
10 3								

Drill Method: Vibracore

Drill Company: ATL

Start Date: 5/11/15

End Date: 5/11/15

Hole Size: 3.5 inches

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Sheet: 1 of 1

Project No: WA-102

Project: Black River Site

Client: EPA/ERT

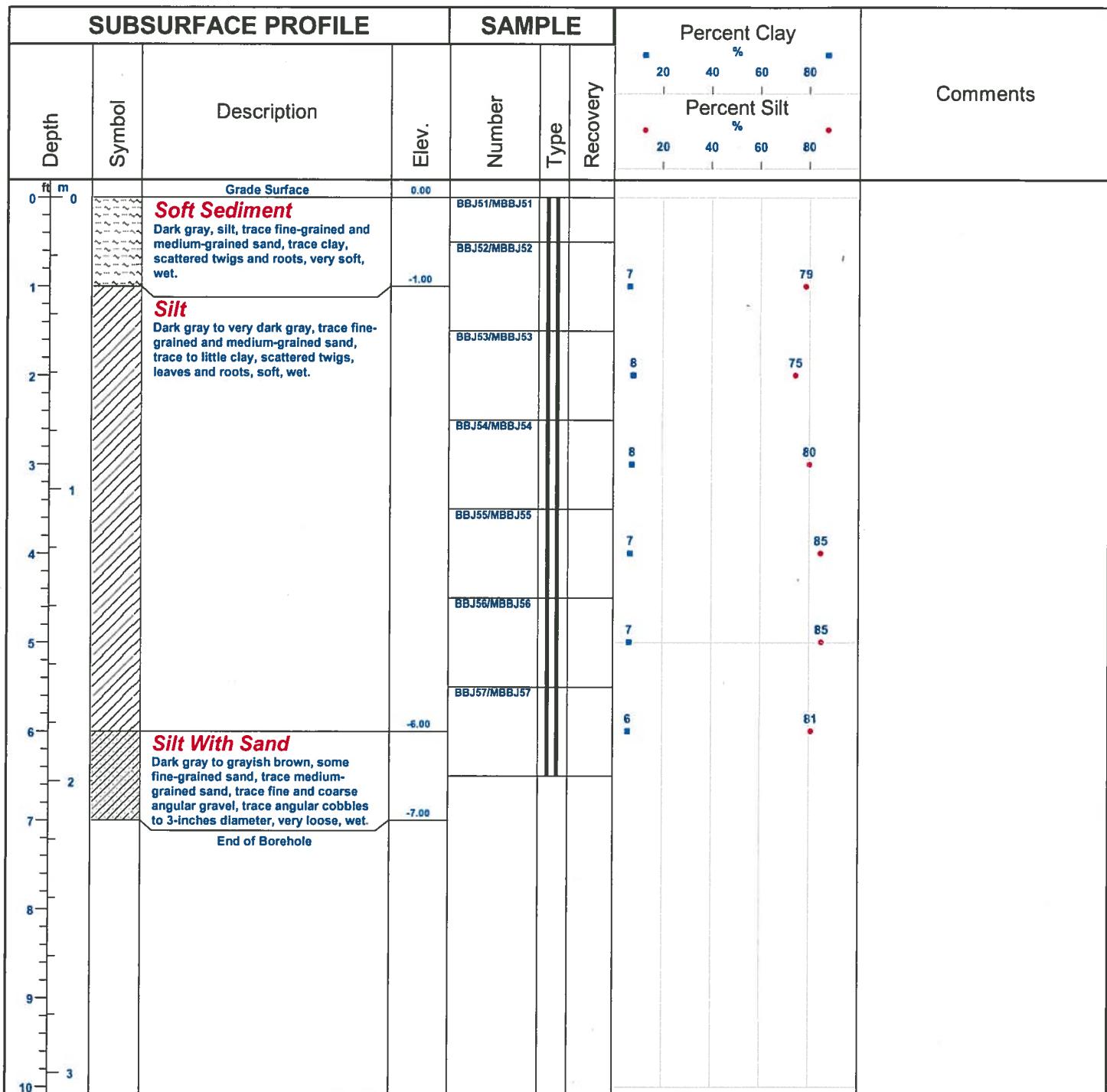
Location: Carthage, NY

Log of Borehole: ERT-59

Latitude: 44.02063357

Longitude: -75.64847089

Logged By: J. Bolduc



Drill Method: Vibracore

Drill Company: ATL

Start Date: 5/11/15

End Date: 5/11/15

Hole Size: 3.5 inches

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Sheet: 1 of 1

Project No: WA-102

Project: Black River Site

Client: EPA/ERT

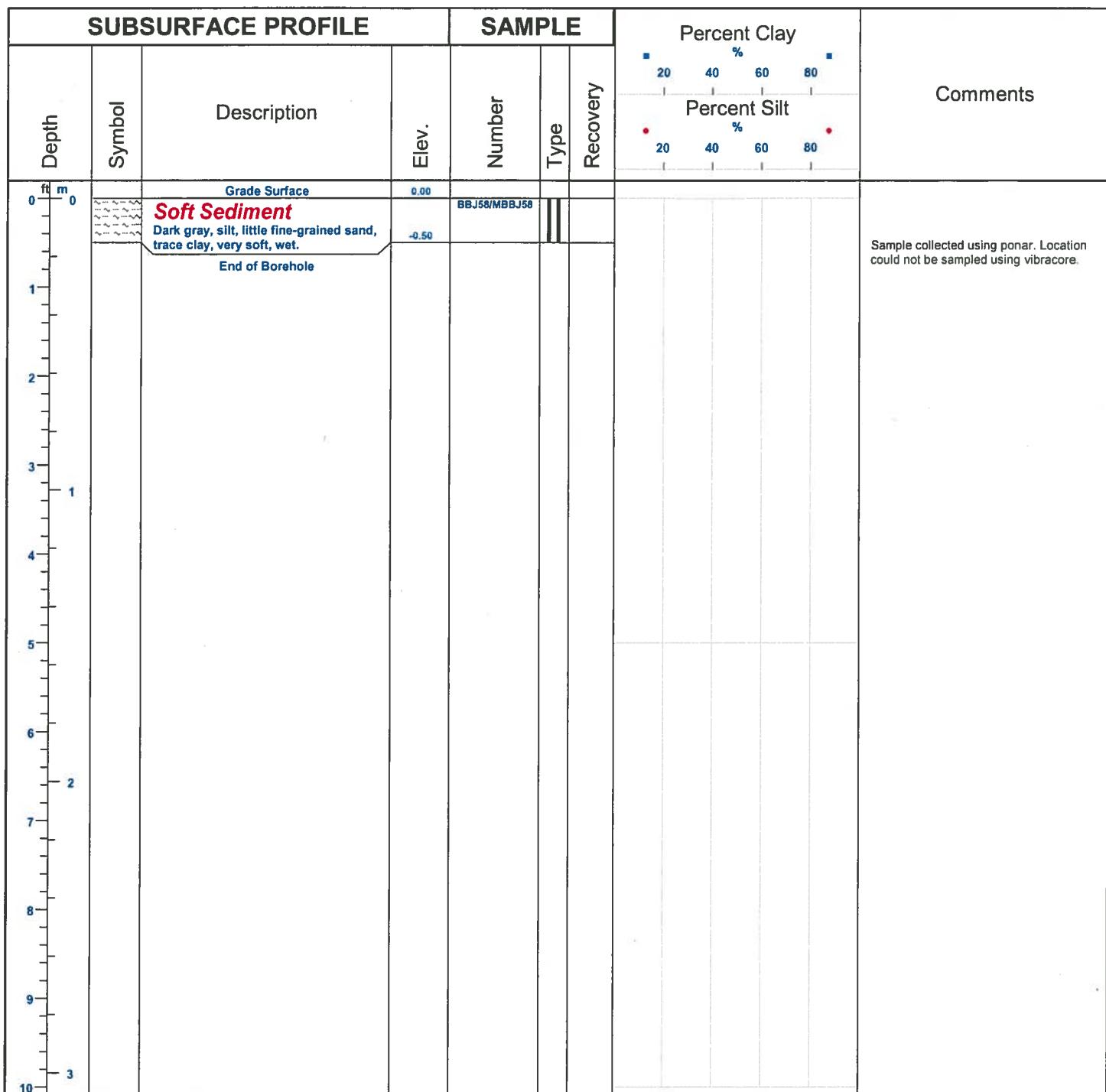
Location: Carthage, NY

Log of Borehole: ERT-60

Latitude: 44.02167914

Longitude: -75.64970543

Logged By: J. Bolduc



Drill Method: Ponar

Start Date: 5/11/15

Hole Size: Not Applicable

Drill Company: ATL

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2890 Woodbridge Avenue
Building 209 Annex
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End Date: 5/11/15

Sheet: 1 of 1

Project No: WA-102

Project: Black River Site

Client: EPA/ERT

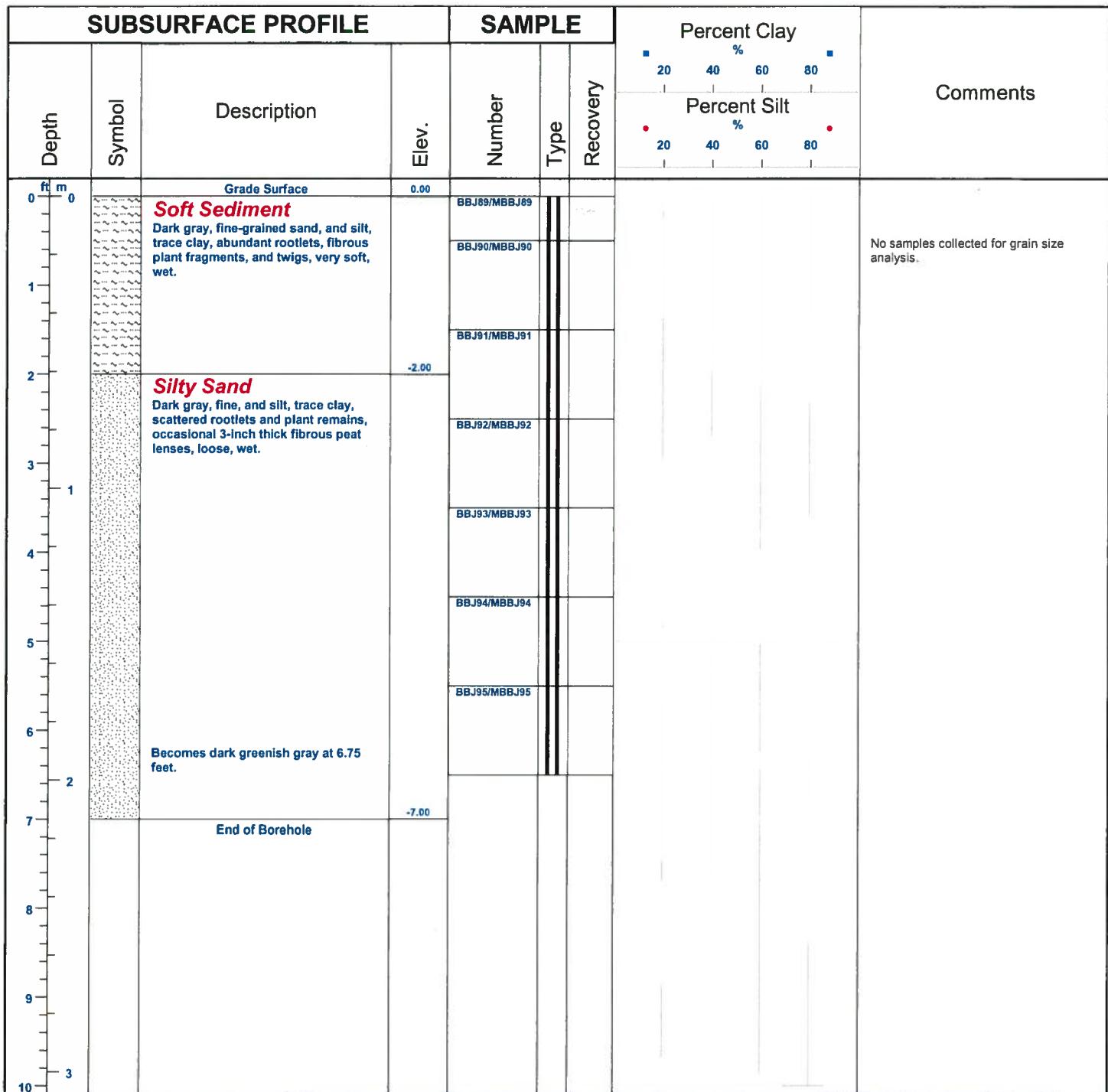
Location: Carthage, NY

Log of Borehole: ERT-61

Latitude: 43.999701

Longitude: -75.638599

Logged By: J. Bolduc



Drill Method: Vibracore

Start Date: 5/12/15

Hole Size: 3.5 inches

Drill Company: ATL

End Date: 5/12/15

Sheet: 1 of 1

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